# NEW ENGLAND FARMER

DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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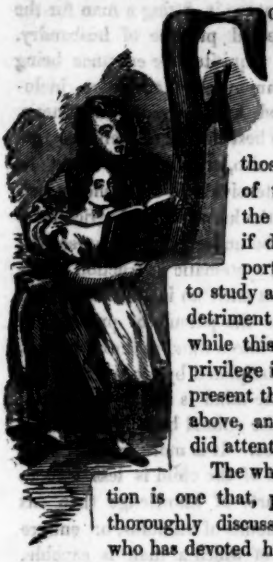
## HOW TO BECOME A TRUE FARMER.



FORTUNATELY for the cultivator of the soil, the demands of the winter months are less exacting upon him, than those of other portions of the year. He has the long evening, and, if disposed, can give a portion of the day-time to study and reading, without detriment to his affairs. So, while this season of rest and privilege is passing, we gladly present the topic of the title above, and ask for it the candid attention of all.

The whole subject of education is one that, perhaps, can not be thoroughly discussed, except by one who has devoted his years of manhood and maturity to the task of instruction. It requires a closeness and comprehensiveness, only to be gained by years of labor and experience. Like a question in law, or theology, or politics, it is one on which every head may have an opinion, and every tongue its say. *The education of the farmer* is not so comprehensive as the general subject of education; but it is no less difficult and delicate, and is by no means a business to be planned and accomplished without much and considerate reflection.

Education consists of two parts, or departments; the education of the boy, which is rudimentary only, and goes to the laying of a foundation for the superstructure afterwards to be raised upon it. This is the object of school education. The other department of education is that of the man, which consists in the development, expansion and application of the rudiments. This is effected, first, by a more intimate research into the body of knowledge, of which those rudiments were little more than the shadow; and, second, by experience and practice in those matters, to which the rudiments apply, and of which they are the index. It is this last department which makes the superstructure, completes the edifice of education. It is this which forms a professional education, which mere rudimentary knowledge is wholly inadequate to do. It is this, consequently, which is necessary to make a scientific farmer. Rudiments will not do it. After passing fifteen years in preparatory and professional studies, from the earliest school lessons to the close of the legal course, half of which is given to college and professional studies, the young lawyer has done little more than lay a foundation for his knowledge of the science of jurisprudence. It is the judicial learning of the *cases* developed in practice that must give completeness to the fabric.

From the above view, imperfectly expressed, the inference would seem to be conclusive that the young farmer is not to receive his professional education, as some speakers and writers have imagined, in the common schools. There is another consideration which presents an objection equally formidable against this plan of education. At the age when the boy is at school, his mind is not sufficiently mature even to comprehend, much less to appreciate and digest, the principles of the vegetable physiology, not so easily seized and appropriated by the mental faculties as those of the animal physiology, from the less obvious operations of the delicate functions of the vegetable kingdom. Neither, if the mind were mature enough, could it, as a first exercise, receive this knowledge, without a well-laid foundation in other parts of knowledge, which it is the object of a common-school education to impart. It is manifest, if the above idea is correct, that the education of a farmer cannot be obtained at a common school, any more than that of a lawyer or physician; — and it is equally plain that a good common-school education *is indispensable* to him, as preliminary to his professional education. It might be added, that the whole time which a farmer's son usually passes at school, would not be sufficient for

the attainment of professional education, unless, at least, to a mature and quick mind, already well-disciplined and stored by a course of preparatory studies.

It is worthy of consideration, however, what studies would be most usefully pursued at the common schools, by a boy who was designed for the business of agriculture, and having reference to his greater accomplishment and skilfulness in that science. To this end, arithmetic and the common mathematics, geometry, and surveying, are particularly adapted to be of the greatest use. Arithmetic, to make him expert at accounts, and in all those calculations which are essential in a well considered plan of farming operations; as well as in the contracts which may be necessary for the improvement of his farm, by buildings or otherwise; in the estimate of profits or losses, in his expenditure, or in his common contracts of sale or purchase. The usefulness of a knowledge of surveying is obvious, in the purchase or sale of land, settling boundaries with his neighbor, or estimating the contents of his tillage or mowing. Geometry is no less so, in the superficial or the solid measures of the material in use by him, or matters coming under his care. But the mathematics and geometry have a more important and general usefulness in training his mind, giving to it that habit of exactness which is of most especial benefit, and essential to the right qualifications of a farmer, more than perhaps of any other, except a lawyer. No other study has such effect in producing this habit, as that of mathematics or geometry. These studies of the common school or academy, we hold to be indispensable in the foundation-work of a thorough farmer's education. And these studies are not only indispensable, but they are enough for a boy of common intellect and common industry to master, in the usual term of a common-school education. To our mind, it would be as sensible for a man to undertake to rear a magnificent edifice on the same day that its foundation is laid, to perform the whole work in both departments of the building in one day, as to perform the whole work of an education so comprehensive as that involved in the sciences pertaining to agriculture, at a common school. Where will the time be found for storing the mind with only the principles of chemistry, geology, botany, vegetable physiology and anatomy, to say nothing of that body of knowledge in details, which it is the part of a thorough knowledge of agriculture to attain; we mean scientific knowledge, which is entirely independent of that understanding of the manual or mechanical operations which is learned by practice only, and which comprises the handicraft of husbandry. In this reference to the studies which should enter into the plan of education of a farmer, we are far enough from presenting the case more unfavorably to the idea of a common school education than should justly to be done, by exaggeration, or over-statement of the amount and extent of knowledge that is to be included in such education. On the contrary, we have not undertaken to enumerate all the studies that should be included in a full course of instruction. It will occur to every one who considers the subject, that a study of the laws of mechanics, for instance, is indispensable to making an accomplished culturist, as it is to the plan of any complete education.

The plan of an agricultural school or college, which has also its advocates, offers more promise of usefulness to the student in agricultural science.

There can hardly, indeed, be a question, that a professional school, established for teaching the sciences that have relation to the art of agriculture, similar to the schools of theology, law, or medicine, may be of great advantage in fitting a man for the skilful and well-directed practice of husbandry. At such a school, the requisites for entrance being a previous good common-school education, including especially a good knowledge of arithmetic, (and to make it of the best degree of usefulness, geometry and surveying also,) the student might be *initiated* into that extensive field of science which makes up the sum of the knowledge of agriculture. Whatever study is to be undertaken in course, and by the methodical and systematic instruction of the school, must be done at such an institution as this, especially designed for the pursuit of professional studies, and instilled into a mind matured by age, and expanded and disciplined by a course of preparatory learning. The mind is a thing of gradual growth, no less than the animal body, or the trunk and branches of the tree. It is more gradual than either. And the mind of the child is less able to receive the higher parts of knowledge than his body is to take the amount of stimulus, or endure the degree of labor of which a man is capable. Such a school might be either connected with a university or separate. The schools for law, physic, and divinity are sometimes connected with a university, and in other cases separate. The course of study at even such a school as this, could not, however, be supposed to *finish* a scientific education for the farm, only as the studies of the law school are said to complete a law education. It does, in each case, complete the systematic pursuit of the study which is intended for an initiation into the business, by a knowledge of its principles. But the school, and the only thorough one, is business, and the time is the whole of life after the faculties have attained their maturity.

Some persons look with much favor on manual-labor schools. So far as practice can be brought to illustrate the studies of the school, it is undoubtedly of the first importance. In the form of instruction by lectures especially, upon any subject, illustration by material objects or natural or me-

chanical operation, is of the greatest auxiliary use. But if the manual labor is intended *as the means of instruction* in the handicraft of the farm, it would seem to be a disproportionate means to the object to be attained. It is paying a large price for a small acquisition.

We repeat, that the place for the study that comprises the education of the *man*, and completes it, is not the school. In the case of the lawyer, it is the office and the court-house. In that of the physician, it is the study and the sick chamber. In the case of the farmer, it must be the *fireside* and the *farm*. And the time is the interval of labor through life. If a man designs to go thoroughly into the study of any particular science, to make himself a master of it, he makes that particular study his business for life, or until he has accomplished it. Such is the mode, and only mode, in and by which, a man masters any science. So Linnæus made himself—and was not made by the school—the greatest botanist in the world; so Herschel, Newton, La Place mastered the knowledge of the stars, and sounded the depths of mathematical science; and so did that son of Massachusetts, Bowditch, in the same department of knowledge, make himself at once familiar with the heavens, and a light to guide the seamen on the deep. The knowledge, such as these men obtained, comprises the education of the *man*, and is attained, and must be, *by the man himself*, and cannot be imparted by the school or college. The full knowledge of any one or more of the sciences, is to be gained in the same way, and in that way alone. And so is the knowledge which may be necessary or useful in the business of life, to be acquired in the same way.

The particular means of attaining such a knowledge as is desired by the farmer, are books, agricultural papers and lectures. If the difficulty arises, how he shall know, without direction of some person of better knowledge, what sciences he shall study, or what books are the best exponents of them, we answer, that in this age of printing and lecturing, the least inquisitive mind may find the proper direction if it seeks it. It is not easy to imagine any serious difficulty in the case, because a man will be qualified to be his own guide, as soon as his own mind is sufficiently prepared, by cultivation, for the study. Such studies, by a mind unprepared, would be attended with results similar to the planting of corn in a rocky and hard soil, without any of the elements of productiveness first being given to it by the application of the proper dressing and culture. It would be a barren harvest. The reading of the farming papers and hearing of lectures, would prepare his mind for the higher studies of the sciences and create in it the desire for that knowledge. He will soon find from this reading that a knowledge of the constituents of the soil, and of the different kinds of soil, is desirable, and that the science of geology will show him that knowledge; that it is important to know the peculiar combinations and proportions of those constituents in the vegetable world, and in any particular kind of plant, and that he must resort to books of chemistry to give him this knowledge; and that the knowledge derived from both these sciences would be greatly increased to him, as a farmer, if he knew the structure of the plant, its principles of growth, the operation of its functions in appropriating the aliment within reach, in conveying that aliment to its several parts, and converting it to its destined use in the vegetable economy; and he will understand that for this knowledge he must study vegetable anatomy and physiology. His next step in the progress will be to obtain the best books and to pursue those studies at his fireside, making the illustrations of the doctrine contained in them from the daily works and matters that come under his care. This is the mode in which the farmer must be educated.

If it is not already sufficiently stated, let it be again repeated, that *no education*, either scholastic or professional, is *sufficient* to give him the whole of this learning. There cannot be, from the nature of the case, any school that can *thoroughly* educate a *man*, in any science. The instruction there obtained must be rudimentary and limited. There is no institution in which Linnæus, Newton, Herschel and La Place could have pursued their studies, to the extent to which they pursued them, nor can there be; nor in which a complete education in any science can be obtained; nor to such extent less than that, to which many persons would desire to pursue the studies necessary to the science of agriculture. Davy, and Chaptal, and Liebig, and Johnson, the teachers in this science, learned it in the way here pointed out—there being no institutions capable of carrying instruction to the point to which they attained. The education of the *man* is beyond the capacity of the school or college. They can educate the *youth*:—the *man must educate himself* in whatever science or pursuit, in whatever department of knowledge he may choose. This education consists both in the practical application of the rudiments learned in a course of study, and in an accumulation of a body of knowledge in detail neither of which can be taught in a school.

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WHOOPING COUGH.—The Springfield *Republican* says, whooping cough has prevailed in this city this season to a considerable extent. A very great relief, we are assured upon practical knowledge, is obtained by wearing about the neck a fresh tarred rope, of the size of a bed-cord, covered with a thin ribbon. The aroma of the tar has a wonderful effect in quieting the cough, and preventing the spasms—two very essential items in the management of the disorder.

*For the New England Farmer.*

## ON HARVESTING CORN.

MR. EDITOR:—A writer who signs himself "J. Underwood," whose article appears in your paper bearing date Sept. 15, has disclosed his views of harvesting corn, and I beg leave to differ from him. He appears to be prejudiced in favor of the old way, which, if practiced, will be much loss to the farmer. It is twice the work to harvest corn by first cutting the stalks, for it is less work to cut up corn with the tops on, than after they are cut off; so you save the time spent in cutting, binding and drawing, and then you only save one-third of the fodder, while the other two-thirds is of little value if it stands to dry off and take the hard frosts.

Then again it shrinks the corn when cut at the usual time of cutting stalks, as experiment has shown, one-eleventh part in an acre from what it would to let the corn remain in its natural state, as the wise Creator has formed it; so that there is not only a loss in the fodder, but also in the corn. If we were wholly secure from frosts, the largest amount of corn would be obtained to let the corn remain undisturbed till dry enough to husk and put up.

But the safest and best way is to cut up corn when the husks begin to turn white and cleave open; say one-fourth or one-third of it. There will be but a small portion of shrinkage, and there are many advantages; the corn is much better flavored, and has a rich, sweet taste; it is as much better as wheat, rye or barley, which all admit is better, to harvest when the straw is green. The proper time is when the straw is a bright yellow; in like manner, corn should be cut up and set up when the kernel is first yellow, at which time the fodder is mostly green, unless frost has lit on it. The time varies as to when corn should be cut up; some years it will do in August by the 28th, and so on till the 10th of September. This year it is later here in the highlands of Vermont, where the water runs both north and south. Men are inclined to go upon the extremes; some cut their corn quite too soon; there is a loss in so doing; unless to save it from frosts it should not be cut until it is all turned, and the earliest fit for housing? I think there is a saving, if the corn is of large growth, of the value of from five to ten dollars to the acre, over the old way of cutting first the stalks, and then after the fodder is dry and dead cut up that. My practice is to let the corn stand about one week longer before cutting up than those do who cut off the top.

*Roxbury, Vt., Sept.* 18, 1855. A SUBSCRIBER.

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INJURY TO TREES.—The Hartford *Times* says the thick coating of ice upon the cherry, pear and peach trees has served to protect them from the frost, and at the same time has acted in the capacity of a burning glass, by concentrating and intensifying the rays from the sun, until the unseasonable warmth thus imparted has had the effect of starting the flow of sap, and developing the buds. It is feared the damage is very serious.

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SPARE THE BIRDS.—We used to suppose that crows might be regarded as an exception, but we see that this begins to be doubted. The *American Agriculturist* says:—

There is another valuable bird, not mentioned by our correspondent, which has fallen into great disrepute with many of our farmers. We speak of the common crow. Perhaps we are too partial to them. We once reared one of these birds, and a more curious or cunning creature we never saw. He became a most incorrigible thief, and was never so gay as when he could get hold of a silver spoon or some valuable article. We used to call him Jack, a name which he understood and responded to as quickly as any child. He had a high contempt of hawks, and when he saw one sailing along he would pursue him, and rising high in air, come down upon him with terrible vengeance. Sometimes in these excursions we would sing out Jack! and though high up, he would wheel around and come sailing down through the air in the most graceful manner, and alight upon our shoulder. In haying time he always accompanied us into the field, and amused himself in hunting grasshoppers; and the number he ate was surprising. Afterwards, he would go and sit on a haycock and allow them to "settle," when he again renewed the war upon this insect tribe. In a year or two Jack disappeared, having been killed, we suppose, through the enmity of some of our neighbors to the crow-kind.

The great objection to crows is, that they sometimes injure young corn; but this may be easily prevented at a trifling expense, and the good they do, is, in our opinion, infinitely greater than the injury.

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## NEW YORK STATE AGRICULTURAL SOCIETY.

We have before us, the fourteenth volume of the transactions of this Society. It is a noble collection, and raises still higher the reputation of the association, and of its talented secretary.

The volume commences with a description of the new Geological Hall, which the liberality of the State is erecting for the promotion of agriculture in all its various departments. When completed, this Hall will be a monument to the intelligence and public spirit of the State, of which its citizens may justly be proud. Then follows the act passed by the last legislature, to facilitate the formation of Agricultural and Horticultural Societies in the State, the constitution of the State Society, and a list of the life members from its organization.

The report of the secretary, B. P. JOHNSON, Esq., to the legislature, is a model for such documents. Brief in its details, clear in its arrangements, it brings out in bold relief the leading points that have occupied the attention of the society during the current year. Drainage and irrigation, the effects of drought, the ravages of the weevil or wheat midge, the study of the insects injurious to vegetation, special manures, the location of the State Fair, the new building for the Society, and an account of the Fair held at the city of New York, are the principal topics discussed in the report. We should be glad to present the whole of it to our readers, did our space permit. But we must be satisfied with a few brief extracts, remarking, by the way, that it will be a fund from which we may hereafter draw valuable and suggestive thoughts.

The experience of the past season has proved most satisfactorily that thorough draining is the most effectual protection that we know against the effects of drought. By furnishing "far more food to plants, it enables them to strike their roots deeper into the soil, and by increased vigor, to resist much longer the influence of the drought." This fact, in addition to often the demonstrated truth, that it "changes swamps, that have hitherto been a nuisance upon a farm, to most valuable and productive portions," proves abundantly its importance as a means of agricultural improvement.

Irrigation, also, is a means of improvement, which we are happy to know is engaging the attention of Massachusetts, as well as New York farmers. Says one New York farmer, "it is now about four years since I turned a stream of water over about thirty acres of my farm that were conveniently situated for the purpose, and the consequence has been that the yield of my grass and hay crops has been more than doubled, and much of it upon the gravel soil, four times told more than ever before."

Reports respecting the use of special manures should always exhibit, not only the results of the produce raised by these means, but the actual cost of the manure used. Suppose a piece of ground produces 2000 pounds of hay; by the addition of 400 pounds of guano, you get 4000 pounds of hay, you have doubled your crop. But if the hay is worth but $8,00 per ton, which is the case in large sections of the interior, and the guano costs $10, does it pay? This is the real question, after all, upon which the question of the use of special manures must turn.

We learn from the report that the Legislature appropriated $25,000 for the erection of a building at Albany, for the use of the Society. In the museum of this building, it is designed to preserve farm implements now in use in the State and in the country, and which may hereafter be introduced, and a complete collection of grasses and seeds. The insects, also, which are common, will be correctly arranged and named, with the plants, leaves and twigs upon which their depredations are most commonly committed. Choice and rare plants will also be preserved, and their method of culture exhibited. Such a museum must be of immense and constantly increasing value, not only to the State by whose liberality it is established, but to the country at large.

From the treasurer's report it appears that the income of the Society for the year was $22,546, and its expenditure $19,982. This munificent sum in the hands of the public spirited and energetic men who have the control of it, has enabled them to produce the results which this volume exhibits. One thousand dollars was appropriated to sustain the labors of Asa Fitch, M. D., the State Entomologist; and when we learn that the destruction of wheat in the State was estimated at $9,403,012 85, during the last year, we may well believe that we need to know more of the insects injurious to vegetation, and that liberal appropriations, which tend to increase this knowledge, and our security against their ravages, will be the truest economy. We hope that the incoming legislature of our own State will not fail to make an appropriation to reprint Harris's work on this subject, with such alterations, colored illustrations, and other additions, as he may be called on to prepare for it.

We will occupy no space with the State Fair, as we did this, to some extent, at the time of its occurrence.

In the Horticultural report, a page is appropriated to the Concord grape, and the superintendent of the exhibition says: "All candid men will agree in saying that it is a most valuable addition to our native grapes. Mr. Bull has rendered horticulture a good service by the introduction of this fine grape, and I hope he will be encouraged to continue his experiments in raising vines from the seeds."

The various scientific treatises, prize essays, reports of the several county societies, addresses and discussions in the State House, and at annual meetings, descriptions of farm implements and mechanical labor-saving machines, and reports of individual stock-raisers and farmers, contain matter of very great interest, and show a rapid development of the resources of the Empire State.

And, although there is something—considerable even—which we think may well have been omitted, yet we shall often recur to this volume with the certainty of deriving from it pleasure and instruction.

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*For the New England Farmer.*

## RED CEDAR.

Friend Brown:—In riding, both by rail-road and county-road, my observation has been directed to the rapid increase of this tree. In Medford they seem to be covering the pastures, and the roadsides are lined with them. In many towns near the seashore, I think their number is five times what it was ten years ago. If this be correct, it shows that the climate favors their increase. They do not appear to be confined to any particular soil. They grow on rocky hills, and pine plains, on dry and moist, rich and poor lands. But wherever they are the land is enriched by them. Their timber is valuable for fence posts, and rail road ties, and both limbs and boughs are excellent oven wood, either green or dry. Their branches are numerous, and small, extending but a short distance from the body of the tree, and producing a large amount of seed.

Although I have been acquainted with this tree more than sixty years, I have no recollection of seeing a branch broken by the wind, or a tree blown down, or one of any bigness bent by the snow; therefore it is a very safe tree to cultivate on the line of railroads.

My object in writing the above, is, that railroad

stock-holders may think for themselves, whether it would not be well for them to let their "repair men" gather some seed, and sow it on the line of their railroads, thus raising their own posts and ties. Farmers, can you not make a saving, by sowing this wherever you wish for a fence on pasture land? Depend on it, your cows will not eat it up. Gardners, have you a garden that needs a northern protection? Can you raise a cheaper, handsomer, or more durable hedge, than red cedar?

A. G. SHELDON.

*Wilmington, Dec. 24, 1855.*

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*For the New England Farmer.*

## TO THE READERS OF "THE FARMER,"

LATE OF AMHERST, NOT DECEASED.

"We meet again." Shall we go on longer together? So asks the quondam editor and publisher of the *Farmer*, a journal always upward in its aims, and still aspiring to a higher, broader, more useful life. He must now doff the *pruralis excellentiae*, must no longer say *we*, and must gossip a little less freely in the presence of a new and larger circle of readers; but may yet rejoice to meet his old readers once more, at least, to tender them the cozy adulations of the season, and to ask them *alone*, (other readers having full permission to jump this item,) shall we go on together another year?

If so, please retain this No., and its successors will follow in course. If otherwise, be so kind as to return it to the office in Boston, and its return shall be deemed a refusal, as politely given as has been the invitation; only be sure and get enough out of it to pay you for the postage out, and leave the publisher to take care of the postage back. The return postage need not be prepaid. If any of you prefer the weekly, just say in a brief note to the publisher, with name and post-office distinctly written, "Please send the weekly, instead of the monthly," and your wish will be attended to. If you will take neither, still, a happy new year to you; go ahead; improve your farming; get a better journal than the *New England Farmer*, if you can, but dont't try to get along without some good agricultural paper—its no saving, but much lost—remember that.

A few editors, in announcing the present course of the *Farmer*, have spoken of it as "dead," a slight mistake, but no matter—and some have imputed to farmers, in its vicinity, a lack of interest in its welfare. This is a greater mistake, and must be corrected. Farmers in the neighborhood have done nobly—300, 200, 100 and 50 subscribers in a town is not to be faulted. A few remote towns have done the like. But farmers at a distance seem generally to have reasoned, that an agricultural paper from some important business centre would answer their purposes better. They certainly had a right to choose; and no inference should be drawn unfavorable to their intelligence or generosity. Long since, the farmers of the Connecticut valley had fixed upon Boston, as the place, whence agricultural papers, best adapted to their wants, should come. It was hard to turn them out of a beaten track, and perhaps the effort should not have been made. Those of them south of the Connecticut line have now an excellent paper at Hartford, in their own State, and they will do well to give it a generous support.

We have quite enough agricultural papers, perhaps too many. As a general thing, they are not well supported. With their limited means, they cannot do all that for the benefit of the farmer, which, with enlarged means, might be done. Type setting, a leading item in the expense of publication, costs no more for ten thousand readers than for one. Hence, the more numerous the readers, the more value can the publisher give for the same money. Fewer agricultural publications, and better, are the want of the age. We want condensation rather than expansion. The *New England Farmer* has swallowed up the *Valley Farmer*. The latter has lost its name by the operation; but no matter; ladies lose their names, when they get married, but are not *always* sorry for it. If it should swallow two or three more small papers, and "grow by what it feeds on," it would only hasten the supply of a real want of the farming interest. It need not change its name in consequence of the union, for that is just right as it is; nor its manners, for these have always been good; nor would it be quite modest for the writer to promise, that it shall become more prolific of good things for the farmer. He can only promise to represent the Connecticut valley in it, as well as it can be represented by such sort of timber, and to contribute his mite towards making it what its leading conductors are always striving to make it—a sound, truthful, reliable journal, ever *conservative*, and yet *progressive*, occasionally whipping up the loitering on the one hand, and often checking the visionary on the other.

To former readers of the *Farmer*, who will receive the *New England Farmer* in its stead, may it prove a pleasant and useful visitant for the year to come, and as much longer as they see fit to receive it, adding something to their happiness, and something to their wealth, as their reception of it will afford a high gratification to the writer.

J. A. N.

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*For the New England Farmer.*

## TRANSIENT BOLT.

HOW TO STOP ITS NOISE.

Passing my neighbor Goodman's yard, to-day, I saw him at work on a wagon, and in a few words he told me how he stops the jingle of the transient bolt on his light four-wheeled vehicles.

He cuts a peice of india rubber from an old fashioned shoe, that will just go round the bolt, and then, placing it nicely down into the hole through the rocker iron and bed-piece, enters the bolt, and has the wagon together again.

He says the rubber will last a number of years. I have noticed that his vehicles run noiseless, except the proper squeak of the axles. *They* get the best of oil, and talk *some*.

W. D. B.

*Concord, Nov. 28th, 1855.*

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THE OLD FARMER'S ALMANACK. Established in 1793, by ROBERT B. THOMAS.—Those who try to keep house in this enlightened age without a copy of this old *fireside companion*, must expect to have their pork shrink in the pot and their beans grow hard by boiling! The cook *must* have it, and so must everybody. How could we tell when the sun rises, or the moon, or anybody else, without the *Old*

*Farmer's Almanack!* How should we know when it rains, or when the plants need watering, or when to get the sleigh out, or to hang the shirts out to dry, if that "jolly old brick" in the title-page, flapping his wings and wasting all the water in his jug, didn't tell us?

Then, to live like anybody, go to Hickling, Swan & Brown's, Boston, and purchase it.

## CHIMES FOR THE TIMES.

BY WILLIAM LYLE.

Be not jealous over-much,
But hope and time will make you better;
There is a faith care cannot touch,
Which leaves the soul without a fetter.
O! it is but a sorry creed
To look for nothing but deceiving—
To meet a kindness in your need,
With a smile of misbelieving!
The tide of ill is not so strong;
Man loves not always wrath and wrong.

It cannot be that every heart
Is steeled so much against its neighbor;
Let each with reason play his part,
And fruit will spring from out the labor;
Progressing still life's journey through,
Be just and kind towards your fellow,
Remembering whate'er you do,
That duty spreads the smoothest pillow
And ne'er the hand of friendship spurn,
But trust, and man will trust in turn.

Some men there be who deem it good
In trade to overreach a brotner;
And some who would not, though they could,
Upraise a hand to help another;
They deem not, though convulsions wide
May show the earth by danger shaken,
That still of hearts unjust through pride,
A dark and true account is taken;
Kingdoms may quake and thrones may fall,
But God is looking over all.

O! join not then the strifes of men,
But hourly show by waxing kinder,
That ye have reached the moment when
Reason no more is growing blinder!
And though ye hope that time should yield
A change for each benighted nation,
Seek not at first so wide a field
To fling the seeds of reformation;
But sow them first in hearts at home,
Then trust in God, and fruit will come.

*Mark-Lane Express.*

## INSTRUCTION IN AGRICULTURE.

It appears by a recent catalogue of Amherst College, that the winter term of that Institution will commence on the 9th of January, and is to continue *fourteen* weeks. Of the large and increasing number of students, several we are glad to see, are devoting themselves to the study of Agriculture, under the direction of Prof. NASH; and there can be no doubt that young men having an eye to the farm, as their field of future action, can acquire, by a trifling expense of time and money, knowledge, which will be of essential service to them through life. Besides instruction in Practical Agriculture, in connection with a liberal course of reading, and a free use of the geological and other cabinets, there is to be, we understand, during the coming term, a very full and complete course of chemical lectures by Professor CLARK. In chemistry, as taught by experimental lectures, with apparatus ample for illustrating and making plain its difficult points, we have long thought, is the key to many of the farmer's most earnest inquiries; and we should think that this course of lectures alone would be worth more to a young farmer, or one wishing to become a farmer, than the expenses of the whole term.

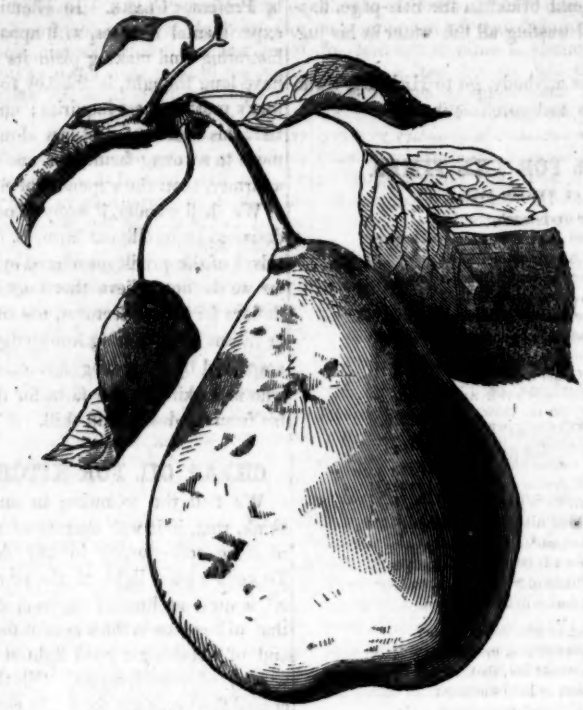
We shall wonder, if many of our young men, who desire to be intelligent farmers, do not avail themselves of the privileges offered by Amherst College; for we do not believe that fourteen weeks and ten dollars for tuition lectures, use of cabinets, and other means for acquiring knowledge, could be better employed by the young farmer, or the young man who is looking to the farm for the employment of his future industry and skill.

## CHEAP OIL FOR KITCHEN LAMPS.

We find the following in an old almanac, and think, that, if it will operate as stated, it would be of some consequence in our domestic economy. To keep a good light, at the present high price of oil, is quite an item of expense, and any suggestion that will put us in the way of reducing that expense, and of obtaining a good light at the same time, is worthy of consideration. Oil that could be purchased five years ago for $1,25 cents per gallon, now sells at $2, and the dirty whale oil that was then considered unfit for the most common use, is selling now at eighty or ninety cents, and even one dollar a gallon.

"Let all scraps of fat (including even whatever bits are left on the dinner-plates) and all drippings, be set in a cold place. When the crock is full, transfer the fat to an iron pot, filling it half-way up with fat, and pour in sufficient cold water to reach the top. Set it over the fire, and boil and skim it, till the impurities are removed. Next pour the melted fat into a large broad pan of cold water, and set it away to cool. It will harden into a cake. Then take out the cake, and put it away in a cool place. When wanted for use, cut off a sufficient quantity, melt by the fire till it becomes liquid, and then fill the lamp with it, as with lard. It will give a clear, bright light, quite equal to that of lard, and better than whale oil, and it costs nothing but the trouble of preparing the fat. We highly recommend this piece of economy."

FINE APPLES.—We have before us one of MORRISON'S incomparable Red Seedling apples, and one of the Red Russet, which Mr. Cole said "seems to be a cross between the Baldwin and Roxbury Russet." It has patches of carmine similar to those on the Hunt Russet, and we know of no other apple which has them. Both these apples are as fine in flavor as in appearance. Mr. Morrison is now testing their keeping qualities.



## THE TYSON PEAR.

Last summer we saw a fine tree, and finely loaded with fruit, of this excellent variety of the pear, in the garden of His Excellency Gov. Gardner, at Dorchester. Later in the season we were furnished with an ample basket of the ripened fruit, which we found delicious, and from one among the number we have had the illustration here given sketched.

This pear is not large, perhaps a little below medium size; it has the striking pear form, is light yellow, with russet patches, and reddish in the sun. Stem medial length and set on a pe'nt; basin broad and shallow; flesh white, melting, very juicy, sweet, with a delicious aromatic flavor. It is fit for eating in the latter part of August or first of September. By most amateurs it is not ranked high among the good pears, but is worthy a place in any considerable garden. The original tree stood in Jenkinstown, Pa., and the tree on which the fruit grew of which we have been speaking, we have understood to have sprung from the first scion, cut from the old tree, which was set in this State.

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When to Wear India Rubbers.—We have noticed that many persons in our city wear india rubber overshoes in cold, dry weather, to keep their feet warm. This is an injurious and evil practice. India rubber shoes are very comfortable and valuable for covering the feet during wet, sloppy weather, but they should never be worn on any other occasion; their sole use should be to keep out water. They should therefore be put off whenever the wearer enters a house, and be worn as little as possible, because they are air tight, and both retain and restrain the perspiration of the feet. The air cannot be excluded from them, or from any other portion of the body, for any length of time, without sensibly affecting the health. It is our opinion, that no habit tends more to good health than clean feet and clean, dry stockings, so as to allow the free perspiration of the nether extremities.

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Curiosities of Water.—Nor is the hailstone less soluble in earth than in air. Placed under a bell glass with twice its weight of lime, it gradually melts and disappears; and there remain four parts, instead of three, of perfectly dry earth under the glass. Of a plaster of Paris statue, weighing five pounds, more than one good pound is solidified water. Even the precious opal is but a mass of flint and water, combined in the proportion of nine grains of the earthy ingredient to one of the fluid. Of an acre of clay land a foot deep, weighing about one thousand two hundred tons, at least four hundred tons are water; and, even of the great mountain chains with which the globe is ribbed, many millions of tons are water solidified into earth.

Water, indeed exists around us to an extent and under conditions which escape the notice of cursory observers. When the dyer buys of the dry salter one hundred pounds each of alum, carbonate of soda, and soap, he obtains in exchange for his money, no less than forty-five pounds of water in the first lot, sixty-four pounds in the second, and a variable quantity, sometimes amounting to seventy-three and a half pounds, in the third. Even the transparent air we breathe contains, in ordinary weather, about five grains of water diffused through each cubic foot of its bulk, and thus rarified water no more wets the air, than the solidified water wets the lime or opal in which it is absorbed.

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*For the New England Farmer.*

## LIQUID MANURE.

BY PROF. J. A. NASH.

Liquid manuring, as first practiced by Mr. Mechi, in the neighborhood of London, and Mr. Littledale, near Liverpool, now beginning to be imitated by other distinguished farmers in that country, and perhaps by some in this, is effected by the following means:

An immense tank is constructed in the yard, into which the solid excrements from the barn, sty, fold, &c., are thrown. Into the same tank are directed all the liquid excrements of the premises. Whatever about the building can add to the fertility of the fields, is added; and if purchased fertilizers, whether in the shape of dead animals from the city, or of phosphates, guano, poudrette, &c., are to be used on the farm, they are all thrown together into this tank. It becomes an *omnium gatherum*.

A considerable stream of water—a small brook in some cases, in others a collection of drainage waters from the higher grounds; or a copious spring, if there be one near—is there directed upon them. Water is supplied in such abundance, as to completely neutralize the foul odors that would otherwise be generated. Water, it should be understood, is in all cases a sufficient deodorizer, provided enough of it be used. The great quantity of the water in the tank holds the soluble matters of the various manures there gathered in solution; and when agitated, as it should be before its application to the land, holds in suspension the finer soluble portions of the manures, so that it appears slightly colored by the soluble parts of the manure, and a very little roily, by reason of the insoluble.

Any one will see, that by this time, the quantity of water has become too great to be removed by any ordinary means of transportation. A smart shower, lasting an hour or two, and giving one inch of water in depth, gives about 115 tons to the acre. Such manure requires to be supplied in like quantity every few days, as well while the crops are growing, as in preparing the ground before hand, in order to produce the best results. It is manifest, therefore, that unless some very cheap mode of transportation can be devised, such manure would not be worth applying. To obviate this difficulty, an iron pipe, some two inches in diameter, is laid from the tank, below the frost and below the possibility of being struck by the plow, branching to all parts of the farm. To this pipe hydrants are attached, one to every ten or twelve acres. The water in the tank is forced into this pipe by a steam power; men in the different fields, with a gutta percha hose, some eighty feet in length, attached to a hydrant, direct a stream of the dilute liquid manure high into the air, frequently fifty feet or more, whence it falls, like rain, upon the growing crops, not beating them down, as it would, if thrown in a solid stream horizontally upon them. This is an imitation of Heaven's way of fertilizing the earth by means of rain, each drop of rain water containing, as this manure does, a few impurities, of which it has cleansed the atmosphere, in passing through it, the impurities, in both cases, being imparted to the soil, as the water passes downward through that.

The foregoing will give a pretty good idea of liquid manuring, as practiced by the gentlemen before named, on a liberal scale, and at great expense for the outset, but with very little, for the subsequent application of the manure. Something like $75 an acre is requisite for under-draining the ground, procuring and laying the iron pipes, constructing the tank, purchasing the engine and hose, and getting the whole into full operation; but when this is done, the liquid manure can be distributed on any part of the farm, remote as well as near, for only a few mills per ton. Let it be kept in mind, that this liquid manure, being greatly diluted, little differing from rain water slightly roiled, distributes its insoluble parts evenly over the surface, where, under the action of sun and air, they soon become soluble and fit food for plants, thus giving an advantage, with regard to them, over being plowed under, where they might remain a long time inert; while the soluble parts are imparted to the soil at some depth below the surface, as the water penetrates downwards, varying according to the quantity applied at once. If applied often, and little at a time, the effect terminates near the surface; but if applied in very large quantities, it extends farther downward. Mr. Mechi says, he wants his soil manured all the way from the surface to three feet below; that the roots of crops will go as low as there is *prepared* food for them; and that liquid manuring is the only means of tempting the roots downward among inexhaustible supplies of earth-food for plants. We are not to infer from this, that he would advocate the plowing in of manures very deeply. That is a different matter. If you were to bury solid manure three feet under ground, you might about as well sink it three miles; for in either case it would be excluded from air, would not ferment, but would remain in a condition unavailable to the plant; whereas, in the case of liquid manure, it is already in a state to be seized up and appropriated to the growth of plants. As some men, who would not swallow pure alcohol, will imbibe it pretty freely, when mixed with three or four times its bulk of water; so plants will recoil from their own appropriate food, if too strong, when they will drink it in like topers, if dissolved and well diluted. We often speak of the food of plants; and yet plants do not *eat*; they only *drink*; and it must be admitted that they are not fond of strong drink.

The advantages of liquid manuring seem to be, that it is capable of providing pabulum for crops, in the right state—that of a weak solution; at the right time—just when the plant requires it; and in the best manner—as regards the depth it is to penetrate the soil; and it gives the farmer great power

over his soils and crops, enabling him to adapt the one to the other, to supply deficiencies when they become manifest, and to step in at any time and correct mistakes which he may have made at seed time. The disadvantages are, the expensiveness of the preparation, and a want of capital. To prepare 80 acres for this mode of manuring, if Mr. Mechi's example of doing everything in the most thorough, durable way, were followed, would cost $6000. If Yankee ingenuity could effect the same object at half the cost—a thing more than probable, and if half the remaining cost could be avoided, by selecting land so porous as to require no under-draining—as with more than half of all the land in New England, still the expense would be beyond the means of the majority of farmers; and there is no use in advising farmers to do what they cannot do. If some retired merchant, who is trying his hand at farming, would be willing to draw something from his easily gotten treasures, for the sake of trying a brilliant experiment, and being applauded or laughed at, as the result might require, it would be well. That miserably poor lands, as were Mr. Mechi's, originally, can, in this way, be made to produce astonishingly, is already settled. It remains to be decided whether this mode of eliciting great crops can be made profitable, and the man who decides it, will do a good thing for agriculture, and, whether laughed at or praised, will be sure to gain notoriety. Who will try it? The writer of this believes he could give the requisite information—how to begin and how to proceed; having examined Mr. Mechi's and Mr. Littledale's works under the most favorable circumstances. But it might be well for the man who would try the experiment, to run over to England and see for himself. It would be worth an Atlantic trip to converse with those men, and to witness their high intelligence and noble enthusiam in behalf of agriculture. They are men who love Old England, but they love America also, enthusiastically, as well they may, for it is their trade with this country that has enabled them to farm in princely style, and that only for their amusement.

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*For the New England Farmer.*

## FARMERS' CLUBS.

MR. EDITOR:—The Farmers' Club is an institution which is destined, I believe, to work a great improvement, not only in the *farms* of New England, but also in the *farmers*. And herein, perhaps, lies its chief value—that it will inevitably call out and exercise the intellect of the members, develop it, make it more active, and give them the habit of thinking more upon the various topics connected with their occupation. It is a school,—a school of the right sort, where the pupils are obliged to look sharply, and with their own eyes, at the various problems set for them to work out. Without claiming perfection for all the theories or opinions advanced in these clubs, it is safe to say that much of good, sound, practical common sense is spoken, and many valuable facts in the experience of the members is developed and brought to light, that might otherwise have passed into the chaos of forgotten things. A man's own experience will be of much more value to himself, even, when he is obliged to analyze it and think upon it, and put it into shape, that it may be seen in all its aspects. Without doubt, crude opinions are sometimes advanced, and real experiences sometimes so imperfectly understood and related, that they do not teach the truth. All this occurs also among those who are not farmers—among those who are, by themselves and others, considered wise and learned. But the habit of closer observation, which is is stimulated by the expectation of being called upon to relate our experiences; the habit of keenly scrutinizing and sifting the theories and practices of ourselves and others, with entire freedom, cannot but aid us in the endeavor after improvement—if in no other way, by giving to our minds an increase of vigor and activity. A man who is thus quickened, must make a more intelligent farmer, a wiser and a happier man. JONATHAN SHORT.

*Elm Lodge, Dec.* 20, 1855.

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*For the New England Farmer.*

## HOW TO KEEP YOUR HOUSE WARM IN THE COUNTRY.

BY HENRY F. FRENCH.

Back Plastering—Double Windows—Cold Air not always Pure Air—Furnaces or Stoves, that is the question—Furnaces for Wood—Air-Tights not necessarily Fatal—Primary School Room in Exeter—Practical Objections to Furnaces—Ventilation the Main Point.

In my former article, on this subject, I omitted to allude to one idea, which is all important. It is this,—if you would keep your house warm, make it tight. In building, see that air, as well as water, is excluded, except through proper openings. The cheapest and best mode of rendering the walls of a wooden house tight, is, by back plastering—plastering between the studs before the usual lathing is put on. This should be done by furring out, say an inch from the boarding and lathing, so as to leave an air space between the boarding and back plastering, and there will be another air space between this and the common plastering, which will be a far better protection from cold, than solid walls of the same thickness, of any material.

Next, to make your house tight, put on *double windows*, upon the rooms usually occupied. They should be made whole, and screwed upon the outside, rabbeted into the window frames, or otherwise nicely adjusted, with one or more panes in each room, hung on hinges for ventilation, unless better means are provided. Then by opening the inside sash, and the single pane of the outer sash, air may be admitted as occasion requires.

These suggestions will, of course, be met, by those who do not think much on the subject, but "only think they are thinking," with the objection that our houses are too tight now for health, and that the very difficulty is that we have not fresh air enough. All this is very true, as to not having fresh air enough, but furnishes no reason for admitting the winds of Heaven through all sorts of cracks, in unlimited quantities. Were one to advise us, because water is essential to health and comfort, in our houses, to leave leak holes all over it, to admit a proper supply, none of us would be

likely to adopt that mode in preference to aqueduct pipes, which we can control as we please. Somewhat akin to this absurdity, is the idea, that, because fresh air is essential, we should allow it to blow through our houses without obstruction.

But there is another consideration, which must not be forgotten, as to double windows. Although glass is, comparatively, a non-conducter, yet a single thickness, of an eighth of an inch, between the temperature of zero without, and seventy degrees within, is an insufficient protection. The glass becomes cold, so cold that ice or frost, as we term it, sometimes forms on the inside of it, even in a room comfortably warm, near the fire; and the air of the room is continually cooled by contact with the glass, without the admission of any fresh air, for no air passes through the glass, though the heat constantly escapes through it. The distinction between *cold* air and *fresh* air, must not be forgotten. The cold that comes through the glass, if we may use an expression not quite philosophical, does not purify the air of the room. We are apt to associate the idea of bad air with that of warm air, but a man would die just as soon, bottled up in a glass jar, for want of fresh air, in a cold, as in a warm place.

What we need most to provide for, is, not cold air, but air that has not been vitiated by breathing. In other words, we require a change of air in our rooms, and this not by accidental cracks, left by the unskilfulness of carpenters and masons, but by some systematic arrangement for its admission and escape. The old idea, that, fight as manfully as we may, against the admission of air, enough will somehow get in, must be given up. We can, and for economy ought to, make our houses tight, and as we usually build in these days, they are, with stoves in them, too close for health.

And now, as to the question of *furnaces* or *stoves* for houses in the country. This question does not depend upon the comparative cost of wood and coal, because furnaces are much in use, in some parts of New England, heated by wood. They are frequently constructed of a common cast iron stove, from two to four feet long, with a sheet iron drum on top, all enclosed in a brick chamber, from which the hot air is taken directly, by the usual pipes. This cheap and simple mode of heating is liable to the objection, that usually the stove is heated red hot, and so the air is vitiated before it reaches the persons who are to breathe it. All furnaces are obnoxious to the same objection, in some degree, so far as I know, though I dare say, science has, in theory, at least, obviated the difficulty, and every patentee of a furnace in the land will assure you, that his invention rather improves than corrupts the air passing through it. The theory of a furnace, which shall never be red hot, where it comes in contact with the air that passes to the rooms, supplied abundantly with fresh air from without, and with water to counteract the drying tendency of the heating process, is unexceptionable. A very large opening from the open air, not from the cellar, as often arranged, is necessary for the supply of air, and corresponding openings by way of ventilators, to allow its free circulation and escape, are also essential. For a furnace designed to warm five or six rooms of ordinary size, the opening for admission of air should be not a mere stove pipe, but a box eighteen or twenty inches square, or perhaps better, two boxes of that size, opening towards different points, to be used according as the wind may blow, and constructed with gates or valves, to be opened and closed by means of cords or rods, from within the house.

Now an air-tight stove, though perhaps more in use than any other, because it furnishes the most heat, at least expense of fuel, is generally regarded as the very worst enemy which we take to our homes and firesides, and as generally managed, is bad enough to deserve universal condemnation, but with proper attention to ventilation, is perhaps as unobjectionable as most furnaces.

The Primary School House, here in Exeter, a plan and description of which may be seen in volume five of the monthly *N. E. Farmer*, affords the best illustration of my idea of the best use of air-tight stoves. It is in full view from my window, as I write, and my children attend the school there. The school-room is twenty-five feet square, and thirteen in height. It has five large windows, not double, exposed on three sides, and accommodates sixty-two children, and it is warmed by a single air-tight, sheet-iron stove, of common size and construction, which stands within about six feet of the chimney at the east side of the room, with funnel enough to go up about eight feet, and thence to the chimney. Under the stove is a large register which admits the air directly from the out-door world. At the west side of the room, there is a ventilator in the ceiling, opening into the attic, which again is relieved of its vitiated air by a copper ventilator on the roof. This simple and cheap arrangement gives sufficient heat in the coldest of New Hampshire weather, and the air of the room, though constantly drawn upon by some sixty little pairs of lungs, for vitalizing their young blood, is so constantly changing, as to give no such indication of impurity, as occurs to you on entering a common air-tight room, inhabited by a single old bachelor and his close stove. The whole secret of the matter is this: abundance of fresh air enters under the stove, and becomes warm as it is drawn up around it. The ventilator in the ceiling at the other end, is not a mere show pipe, such as we see in parlors—a mere little ornamental pretence, but a trap-door about eighteen inches by twenty-four, on hinges, managed by a cord and pulleys. The air

warmed by the stove, passes over the heads of the children, is diffused through the room, and goes out at the top, to make room for more.

This is the best that can be done with an air-tight stove. If the heat be sufficient, as it usually is, I suppose, in a wood stove, to carry off the carbonic acid, generated by combustion, I see no objection whatever to this mode of warming a room. My friend, Professor Hoyt, deserves the credit of this simple but scientific arrangement, as he insisted upon trying it, against my solemn protest, that no such stove could be in any way induced to warm so large a room. The teacher informs me that she usually keeps the register and ventilator both open, and that she is told by the committee that her room requires much less fuel than either of the five other school-rooms in the district.

And, by the way, a visit to this model school, taught by a model teacher, in a room as neat as a lady's parlor, will compensate any of our friends for the trouble of a call as they pass through our village.

To furnaces, for common houses in the country, there are several practical objections, which most of us can appreciate. In the first place, the heat is not equally diffused. The vertical pipes, or those nearly so, take all the heat, at the loss of those which run horizontally. If in a cold day, you keep your register constantly open so as to be very comfortable, the family in the parlor are probably shivering with cold, and you feel as guilty, as if you had appropriated the coats and cloaks of the household for a ride, or pulled off their bed clothing while they were asleep, and so kept yourself warm at their expense. Again, in the moderate and changeable weather of spring, the furnace supplies, on pleasant days, quite too much heat, while in the severest cold of winter, if enough is generated, it cannot be equally diffused.

So far as I can learn, warming by a furnace is far more expensive than by stoves. There is evidently a great loss of heat, by generating it in the cellar, and conducting it in pipes through the house. We thus warm a great many bricks, and a good deal of machinery, the warmth from which never benefits us. Doubtless, this may be in some measure compensated by the philosophical arrangement of the best furnaces. My own house is kept comfortable, by means of a close coal stove in the hall, an open coal stove in the parlor, and wood stoves in all the other rooms, except the kitchen. When I built it, in 1850, I arranged it, so that, if my notions should change, a furnace might be put in.

I have no insuperable objection to furnaces, but am convinced, that no man, who in the country relies on a furnace *alone* to warm his house, will long be satisfied. He will find, that stoves, or fireplaces at certain seasons, are still necessary. The woe was pronounced, not against riches, but against *trusting* in riches, and so I think it may be against those who trust in furnaces alone, for warmth in our changing climate.

After all, the point chiefly to be regarded is *Ventilation*. Yankee ingenuity has already furnished abundant facilities for heating our houses at little cost, and whenever the importance of Fresh Air is fully appreciated, the demand for the means of introducing this luxury, which is unthought of because so common, will soon be met by an abundant supply.

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*For the New England Farmer,*

## THINGS IN NEW HAMPSHIRE.

MR. EDITOR —Having recently visited several of the counties in the Granite State. I forward you some of my "pencillings by the way," that you may dispose of them as you see fit. Jaffrey, in the eastern part of Cheshire County, is a pleasant town, having the bald Monadnock on the west, and the Peterboro' mountains on the east. There are two villages, the east and the west; in the former, on the Contocook, which rises in Rindge, are two cotton mills in successful operation, said to be the only mills of the kind in Cheshire County. There is also a school-house, said to be the most perfect of its kind in the State. The structure is of brick, containing below, two school-rooms, with modern and most-approved fixtures. Above, a spacious, commodious and beautiful hall. It speaks well of the wisdom, liberality and correct taste of the people. How can money better be expended than in providing ample facilities for the education of the young?

In the west village is an academy, well-sustained, and a large building for many years occupied as a meeting-house; but now as a town-hall. The frame was being raised on the day of the Bunker Hill battle; when the news of the battle came, so many of the men left for the scene of the conflict, that three days were occupied in putting together the frame.

A short distance westward, the mountain rises with peculiar majesty. It stands an isolated peak, upon an extensive plain rising 3100 feet above the ocean's level. On the north and north-west, the surface gives unmistakeable evidence of having been swept over by some current, removing all loose rocks, and leaving deep traces of its course. The second week in October, I found blueberries near the summit, in good condition—also, dwarf cranberries.

The lover of the bold and the beautiful in nature will be well paid for the labor of clambering to Monadnock's height.

The land in this region has been valued mainly for its pasturage. But a blight has come over it, in the shape of the June grass, or white grass. The evil is a most serious one. This grass takes possession of the soil, to the exclusion of all others; it shoots up very early in the season, matures and ripens in June, and the early part of July. When green, cattle do not like it; dried, it is not only offensive, but very injurious to them. From the first of August the pastures look as though a severe drought had passed over them, and animals are compelled to resort to the swamps, canebrakes and forests for sustenance. How to remove the evil is

a serious question. Could the land be tilled, the difficulty might be obviated. But not an acre in twenty is susceptible of cultivation. The same difficulty is experienced in Massachusetts, especially in portions of Franklin, Hampshire, and Worcester Counties. Will you, Mr. Editor, or some of your correspondents, suggest a remedy? Or, must these lands be abandoned, and the possessors go West in search of better?

The tide of emigration, westward, is making heavy drafts upon the grazing districts of New England. The late census shows that the increase is confined to the cities and manufacturing districts, while the "hill country" has been making a decidedly down-hill movement. Whereas, formerly, Vermont and New Hampshire supplied our cities, and manufacturing towns with butter and cheese, and our mills with wool, they now do but little toward it. In almost every part of the State, I found a New York cheese; and to *see* a sheep it was necessary for me to go as far out of my way as John Randolph was willing to travel for the privilege of *kicking* one.

Agricultural papers and fairs have done much to awaken interest and diffuse information touching the best modes of tilling the soil. The aggregate products of cultivated land in New England have been very considerably increased. The same is true of the orchard. But for the hill-side, the "summer pasture," I have yet to learn that anything effectual has been done. This latter embraces about one-third of all the productive land in New England. Is there no way to renovate it—to save it from utter worthlessness?

R. B. H.

## URATE.

This fertilizer has not been very extensively used, as yet, in our country, and few are aware of its nature, or the process by which it is formed. Every one must have noticed on entering a stable, or other place where horses are confined, a very peculiar and pungent odor, often affecting the eyes, and sometimes the throat, and creating nausea. This offensive principle is ammonia, one of the most powerful, and—contemplated in an agricultural point of view—most valuable of all the gaseous products of vegetable decomposition. Now if we sprinkle common gypsum, or pulverized plaster of paris, we shall economize this volatile substance, and bring it to a condition readily available as a substance for plants. In its fertilizing character and properties, it is similar to *urate*, but not strictly the same.

It is asserted by manufacturers that from three to four hundred weight of urate form an ample dressing for an acre of wheat; but how much better would it be for the farmer to economize the liquid voidings of his domestic animals, in the manner here described, and apply it to his crops of hay, grain and roots, as his necessities or wants may require. All urine is rich in the food of plants; the urea and salts are all highly valuable, and no one who rightly reflects upon the subject, will willingly suffer it to be lost.

Another article of much value in economizing the liquid voidings of animals is sulphuric acid. It should be first diluted, say one gallon of the acid to one and a half gallons of water, and sprinkled over the manure heaps, or floors where animals are confined, every morning. Urine, in its fresh state, does not evolve ammonia; it is only when in the putrifying or fermenting process that this gas is given out or eliminated. Pulverized charcoal, and a solution of copperas, are also valuable, used for this purpose.

By attending to this matter the farmer may easily save a large amount of his richest fertilizers in a single season. His lands will be all the richer for it, and repay him liberally for all the trouble and expense involved.

*For the New England Farmer.*

## FEEDING STOCK.

[*Extract from the Records of the Concord Farmers' Club.*]

* * * * E. Wood, Jr., asked the opinion of different members, as to how much hay it would take to keep a cow in good condition for the winter season of 26 weeks?

E. W. Bull thought it would require from 2½ to 3 tons.

C. W. Goodnow said he had fed to his cow about 2½ tons, commencing before the middle of October, and ending early in May; but thought he might have wasted some by his mode of feeding.

James P. Brown thought 1½ to 2 tons would be sufficient.

James A. Barrett said his father once fed a certain quantity of hay to fifteen cows, and they averaged 22 pounds a day, equal to 3960 pounds in six months; and they had, at the same time, three quarts of meal or shorts, or two quarts of shorts and one quart of oil meal each, daily.

E. Wood, Jr., said a cow giving milk would eat as much as an ox. Different farmers in town had told him that cows would give as much milk if fed on *meadow* hay, as on English hay—and he was now trying the experiment of feeding his cows with meadow hay and oil meal. During the past week he had weighed the hay consumed by fifteen cows in five days. The hay was cut and mixed with the oil meal. The cows averaged 16½ pounds of hay, and 4 pounds of oil meal, daily. Reckoning the hay at $13 a ton, and the oil meal at $43, the weekly cost amounted to about $1,35 for each cow. These 15 cows gave, in the five days of trial, 97 quart cans of milk; or about 8 quarts, each, daily. The whole cost of feed, was, for the five days, $14,39; 90 cans of milk at 30 cents are $27; nearly $13 more than the cost of feed. He mixed 4 quarts of oil meal with 31 pounds of hay, and he thought the cows would eat it better than if mixed with 12 quarts of Indian meal. It takes 5 pails of water to moisten the 31 pounds of hay, and 4 quarts of oil meal. He thought one quart of oil meal was as good as 2 quarts of Indian meal to produce *quantity* of milk. But if he kept only one cow for his family use, he would give Indian instead of oil meal. He believes cut feed is the cheapest way of feeding any stock. He uses Gale's cutter; cuts up his corn butts, moistens, and mixes oil meal with them—and the cows eat nearly all. He would cut them if the cattle did not eat them better, on account of the greater convenience in forking over the manure in spring.

E. W. Bull said, if cows are supplied with warm water and food they will make more milk. He recommended frequent changes of food. Fed on well-cured corn fodder, cows will give more milk than if fed on the best of English hay.

James A. Barrett said, a neighbor of his thought, when feeding his cows on green corn fodder, that they gave more milk, but not so much butter.

At the next meeting, E. W. Bull said, that since the last meeting he had fed his cows partly with meadow hay. He got as much milk, but it was not so good-flavored. The unpleasant flavor was, however, easily removed by scalding the milk. But an important question remained, which could not be answered without a long-continued trial—will the meadow hay sustain the cow in good flesh as well, or nearly as well as English hay?

James P. Brown had also, since the last meeting, fed his milch cows with meadow hay, cut and mixed with shorts and oil meal. His cows did *not* give so much milk, as when they had English hay and the same quantity of meal in swill.

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*For the New England Farmer.*

## GARDEN SOILS.

A good garden may be made by skilful management, upon almost any soil. But the results will differ somewhat according to the nature of the soil; where the soil is a moist, heavy loam, resting upon a clayey subsoil, crops cannot be obtained as early as upon a different soil. But by tillage adapted to the nature of the soil, large heavy crops may be obtained for fall and winter use. Upon such soils only one crop can generally be obtained, in a season. Such soils should be well drained, and cultivated in beds or ridges, so that the surface water may be conducted off, and not be permitted to injure land already sufficiently moist. Horse manure is the best dressing for such soils, when cultivated as a garden, and should be liberally supplied, and well plowed in. Such land is apt to bake and become hard; consequently it requires to be frequently stirred during the growth of the plants. Such a soil is well adapted to the growth of pears and quinces.

When it is an object to obtain early crops, as in the cultivation of market gardens, a light, sandy loam is preferable. When such a soil is made rich by high cultivation, the crops are earlier, more sure and the soil is more easily worked. Many of the most productive gardens in the neighborhood of Boston are made upon light sandy plains that were previously exhausted by cultivation without manure, and that have been redeemed by judicious management. The plow is put in as deep as it can be made to run, and the whole of this depth is made fat by liberal supplies of warm, stimulating manures. It is an important object with market gardeners to get early crops, and they are able to get them in such a soil, two, three and four weeks earlier than in a heavy loam. This gives them a longer season, and by a skilful management of successive crops, they get two or three crops in one season. Apple trees succeed well on such soils, When the ground is enriched by high manuring and the cultivation of hoed crops, the trees grow rapidly, and come into bearing some years sooner than in a colder and heavier soil. They start earlier in the spring, and, of course, have a longer season to grow, and the wood which they make becomes better matured and prepared to endure the cold of the ensuing winter.

In such soils, fall sowing is often practised to advantage. Onions, beets and lettuce are sowed in September and covered with salt hay, rock weed or meadow hay; the mulching is removed early in March, and the ground between the rows stirred, and onions and beets are thus obtained for the market in June, or early in July. Vegetables at this season command nearly double the price that they do later in the season. Three crops are often obtained from the same ground. A portion of ground is plowed as soon as the frost is out, and a heavy dressing of horse manure is plowed in. Early peas are planted in rows perhaps five feet apart; then radishes are sowed broadcast, and raked in. The radishes are pulled before the peas are all picked. Between the rows of peas are planted at proper times, squashes, melons or cucumbers; by the time the vines begin to run, the radishes and peas are removed from the ground, and the whole surface is left in possession of the vines. Early potatoes are taken off in July and the early part of August, and a full crop of turnips is made to follow. Or after peas and potatoes, onions and beets are sowed for the spring market. After lettuce and radishes, cabbages are set for fall use. Many such gardeners start vegetables in hot-beds under glass; thus they obtain potatoes, tomatoes, cabbages and cucumbers some two or three weeks earlier than by open culture, and the increased price amply repays them for the outlay of capital and labor.

Strawberries succeed admirably on such soils, especially if in addition to high culture, irrigation is employed. Some of the strawberry gardens in the vicinity of Baltimore, consisting of from ten to one hundred acres, are made of worn-out sandy land, which has been redeemed by cultivation. One gardener in the neighborhood of Boston, receives more than three thousand dollars annually for the vegetables and fruit grown upon twenty-six acres of such land. His proximity to a ready market, and to an abundant supply of manure, are circumstances which contribute greatly to his success. But high culture, and a skilful arrangement of successive crops are the essential conditions of his prosperity. I do not believe he would make as much money in proportion to his outlay, in the cultivation of a heavy loam, although the soil is in itself much more fertile. Early crops could not be obtained on such a soil, and these are a chief source of profit. Apples would not succeed as well as on a lighter and more sandy soil. From four Porter apple trees on such a soil, apples have been sold to the amount of more than a hundred dollars in a year. This to be sure is an extraordinary product, and was owing to the superior quality of the fruit; but under such culture on a sandy soil, Baldwins, Greenings and Russets will yield from four to five barrels to a tree, worth from two to four dollars a barrel. On such a soil peaches and plums thrive better than on any other, and bear full crops in four or five years from the stone.

Let no man say he cannot have a good garden, because he has only a piece of poor sandy land. On such land, he can have earlier crops than his neighbor who has a deep, rich, moist loam; and if he does not have so heavy a crop, he can have two to his neighbor's one. Plow early and deep, and put

on manure with a liberal hand, and you shall have a luxuriant garden, where you have now an unproductive and barren patch. R.

## AGRICULTURAL SOCIETIES.

*Transactions of the Worcester North, for the year* 1855.—A well printed pamphlet of 84 pages. Before noticing its contents, we call the attention of the officers of the Society, to what we consider as an important omission in the account of the transactions for the year;—and that is the entire absence of any account, whatever, of their Fair or Exhibition. Indeed, from this "History of their Transactions," we do not learn that they had any annual exhibition, or that the farmers, with their products, assembled at any time during the year, for any purpose! Did the members of the society dine together, and if so, where, and who were their invited guests?

Now, in all these associations, it is not so much for the public to learn that twenty members took premiums for orchards and for plowing, and as many more for poultry and butter and choice fruit, as it is to learn, through what particular skill they gained them, and what effect the operations of the Society have had upon their practices in husbandry, and upon their industrial condition. The whole spirit of the thing should be summed up in the few first pages of what purports to be a history of the transactions for the year.

There are several excellent reports in this pamphlet, on Stock, Fruits and Flowers, Grains, Root Crops, Orchards, Manures, &c.

The following extracts are taken from the report entitled, "Fruits and Flowers"—though the flowers, after diligent search, cannot be found. We are glad, however, that the *idea* of flowers was on the mind of the committee, even if they have reported nothing of them. We have often expressed our own opinion of the notion that too much fruit is now under cultivation, and now introduce this committee, with their excellent report, to confirm us.

"It has been estimated, by one well qualified to judge, that the sales of trees throughout our Union, amounts in value to upwards of a million of dollars annually; and the amount increases with every season. Nurseries have been drained of every thing worth cultivation, and very much of that which was worthless. So great, indeed, has been and still is, the mania for tree planting, that well informed persons have expressed fears that the whole matter of raising fruit, with the view of profit, would be 'run into the ground.' That fruit would become so common, that the markets would be glutted, and that as a speculation in the hands of the producer, it would prove an entire failure.

"Let us consider, for a moment, how the case stands at the present time. Are we really in danger of becoming surfeited with an over-abundance of good fruit? Has our experience during the past few years been such as to justify this conclusion? We think not. So far from the market being oversupplied, there are very many people who have never even tasted of some of our finest varieties of fruit. They are not as yet produced in sufficient quantities to get into the markets at all. This is true of even our staple fruit, the apple.

* * * * * * *

"But it may be said that among the millions of trees that have been set within the last five or ten years, but a small number have, as yet, produced fruit in any quantity, and that until the majority of them began to bear crops, the effect upon the market will, of course, be hardly felt. We are not, however, of that class who indulge fears of this nature. We are unable to believe that the better qualities of fruits will ever be purchased, unless, as an occasional exception, at prices which will fail to handsomely remunerate the intelligent producer for his outlay and trouble; and we are strengthened in this conviction, while taking a survey, and learning the history of a large portion of the trees which have been set within ten years past.

* * * * * * *

"We might estimate, in merely an approximate way, the value of the annual growth of a tree, something as follows:—

| | |
|---|---|
| First cost | 35 cts. |
| First year's growth valued at | 10 |
| Second year's | 20 |
| Third year's | 30 |
| Fourth year's | 45 |
| Fifth year's | 60 |
| Sixth year's | 80 |
| Seventh year's | 1,10 |
| Eighth year's | 1,50 |
| Ninth year's | 2,00 |
| Tenth year's | 2,60 |
| | $10,00 |

"By this estimate, the value of a tree in ten years from sitting would amount to $10,00, which for an apple or pear, cannot be considered as too high. Because at this age such trees well cared for, are generally in a condition to produce a crop, the average annual value of which is sufficient to pay the interest on a much larger sum, in fact often to ten times this amount. What more profitable operation then can the farmer pursue than to bring a portion of his lands into orchard. Even if he is a man that looks at the present entirely, the annual increase in value of his farm, in consequence of the accumulation of fruit trees, will always command a price more than enough to cover the whole expense.

"To every man, then, we say, plant fruit trees, but what is of more importance, cultivate and care for them with the same zeal that you bestow on any other crop, and you will be sure of a return that will fill you heart with satisfaction and your purse with something useful."

### ON GRAIN CROPS.

"The Committee take great pleasure in noticing the increasing interest felt by many of the farmers of this society in the cultivation of grain, more particularly wheat and corn. It is often said that wheat is an uncertain crop, but for a few years past the coffee-wheat, so called, with good cultivation, has never failed of giving a good crop. There may be other kinds as good, and when we can raise it for one dollar per bushel, or less, we think it ought to be more generally cultivated. It cannot be said of Indian corn as of wheat, that it is an uncertain crop, for with good cultivation we are sure, nine-

teen out of twenty years, of a bountiful harvest. On this grain the farmer mainly depends to fatten his beef and pork, and to give strength to his animals for labor; and what could the farmer himself do without a good supply of Indian bread and pudding to give him strength for the labor of the farm? It is often said that we cannot raise corn on our rough farms for less than one dollar per bushel, which we think is not true. The average cost of the corn offered in this society for premium this year, is not far from fifty cents per bushel, and we think that with the use of labor-saving implements and a bountiful application of manure, it can be raised at from fifty to seventy-five cents per bushel, generally, which at the present prices leaves a good profit for its cultivation."

*Jabez Fisher's Statement.*—The acre of corn which I enter for the society's premium, was planted upon a moderately strong loam, resting upon a clayey bottom. Its slope was toward the south and east. Cultivated last year for sweet and fodder corn. Plowed twice during the third week in May, ten to twelve inches deep. Manured broad cast, previous to plowing, with 14 loads, containing 4½ cords, of the following compost. Of the clear droppings, solid and liquid, of 1 horse and 7 head of neat stock, 4 parts, wool waste 1 part. Corn of the King Philip variety was sown May 26th, in drills 3 feet 8 inches apart; the stalks at gathering, averaging 7½ inches distant from each other in the row. Manured in the drill with hen manure, worked fine with loam. Hoed twice with the horse hoe, followed by the hand hoe. Culture entirely flat. Stalks were cut up whole Sept. 24th, and stooked on the field. Husked the last week in October, and yielded 6640 pounds of ears, or 41½ pounds to the square rod. The whole amount of soft corn was less than a bushel, of which I make no account. One acre of land in account with Jabez Fisher,

| | Cr. |
|---|---|
| By 92 2-9 bushels, 72 pounds each, of sound corn at $1,12½ | $103,75 |
| " Fodder | 15,00 |
| " Unexpended manure 2-5 of the whole | 14,00 |
| | **Dr.** |
| For interest and taxes | $6,95 |
| " Plowing twice | 4,00 |
| " Cultivating and furrowing | 1,00 |
| " Compost manure | 27,00 |
| " Hen manure | 8,00 |
| " Carting and spreading | 3,00 |
| " Planting and seed | 2,00 |
| " First Hoeing | 3,20 |
| " Second Hoeing | 3,20 |
| " Cutting and stooking | 3.15 |
| " Storing and husking | 9,00 |
| " Balance, being net profit per acre | 62,25 |
| | $132,75 |
| Cost of production of corn per acre | $41,50 |
| " " per bushel of 72 pounds | 45 |
| Profit per bushel | 67½ |

We wish the report on *Gardens* had been more fully considered and detailed.

ON ORCHARDS.

The committee say—

"Mr. Brooks' trees (JOHN BROOKS, Esq., of Princeton) have been injured by the borer, and we think by the potash water. He has, however, taken the best method known to eradicate the first evil—and with a good will—and has resolved to make his liquor a little weaker, if he does not abstain from the 'critter' altogether.

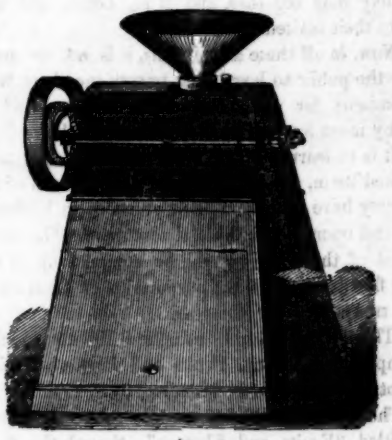
* * * * * *

"Our examination of their several orchards has convinced us that potash, as a wash for trees, should be used with more caution than is generally used. The orchard of Mr. Works was injured, we think, very much by the potash with which he washed his trees, and Mr. Works agrees with the committee in that opinion."

In speaking of the orchard of Mr. Enoch Caldwell, of Princeton, the committee say—

"When the committee were on this lot, the question came up as to the value of such trees, and it was the unanimous opinion that $25 each was not above their value. Is not this an inducement, in a pecuniary point of view, to plant good trees well, and on good ground, well located, and after, cultivate well?"

We regret that in this statement they did not give us the age of the trees.



**SCOTT'S GRAIN MILL.**

This is a small mill, with bolt, and we are assured will grind from 4 to 10 bushels of corn, rye, wheat, &c., per hour, according to the power applied. A considerable number of them have been sold by the Boston agents; and we understand that in every instance they have given entire satisfaction.

Samuel Cooper, Esq., and W. P. Parrott, Esq., of this city, examined it when it was in operation at Gore Block, during the exhibition in October and they say that they "feel safe in recommending it to all those requiring a cheap and efficient mill."

The highest premium was given to it at the above-named exhibition. The mills are complete, ready to attach a belt, and cost $55. They are sold in this city by Messrs. Parker, White & Gannett.

THE AMERICAN FARMER.—Kalamazoo, Michigan, E. PORTER LITTLE, publisher.—This is a weekly paper in common newspaper form, well printed, with handsome type. Our western friends seem determined to progress as fast as the rest of the world in all the substantials of life.

## STORING ROOT AND OTHER CROPS FOR WINTER.

Since the increased culture of root crops, their modes of preservation have become important, as many crops bear higher prices later in the season than in December, while others, if badly stored, are rendered of comparatively little value. The strap-leaf red-top, and other kinds of white turnips, are among those requiring the greatest care, for if stored in too large bulk, without proper ventilation, they become pithy in a short time. Many methods are appealed to, but the one which we have found successful, is to place a ridge of turnips on the surface of the ground, three feet wide at the base, of any required length, and forming a point at the top like the letter A. This should be covered with soil dug from the sides, so as to leave a flat fourteen inches wider than the heap, and surrounding it, thus leaving a ditch around the pile to prevent the admission of moisture to the base on which the turnips are placed. The first covering should not be more than four inches in thickness. On top the heap, at distances not greater than five feet, tufts of straw should be placed, which will leave holes for ventilation, suffering the escaping moisture to pass off during the sweating of the turnips. When the weather becomes more severe, more dirt may be thrown on, until the whole thickness is twelve inches, which will prove entirely sufficient for the severest weather. If the turnips are slightly sweated in this heap before being covered, and are permitted to dry off before covering, they will keep sound until required for use. The end of the heap may be opened, and this should have a southern or south-western exposure. As the turnips are removed, the exposed portions should be covered with straw. Carrots, beets, and ruta-bagas, may all be preserved in this way.

In soils that are very dry and sandy, and thoroughly under-drained, pits may be dug so as to place the roots below the surface of the ground. They may also be kept in cellars covered with dry sand and properly ventilated. Carrots should be compactly stowed, with a small amount of earth between them. Where roots can be placed under sheds, a covering of dry charcoal dust will be found sufficient for their preservation, although the side of the shed may be open to the weather.

To preserve apples, they should be placed in heaps, and covered with planks or straw to induce sweating; this covering should then be removed, and the air suffered to pass freely among them. They will lose eight per cent. of their weight without shrinking in size. In about six weeks the second sweating will occur; and if the atmosphere should then not be as low as the freezing point, the second drying will prepare them for being kept in safety by any of the ordinary methods. Indeed, if shipped immediately after the first sweating, provided the apples be not bruised, they will keep for a voyage of five weeks, and on the sixth week the sweating will again commence, and if not properly aerated, decay will rapidly follow. The object should be to keep them as near the freezing point as possible, but always above it. Delicately flavored apples should never come in contact, directly, with the soil; for if it contains much clay, or carbon, it will abstract the aroma of the apple, and render it comparatively flavorless; indeed, it will often impart a ground-like smell and taste to fruits. The root crops are not so injured.

Parsnips may be preserved in the manner named for turnips; but it is only necessary for the purpose of keeping them clean and free from rains, as freezing does not injure this root; indeed, they are not fit for use until they have been frozen. Market gardeners usually leave part of their parsnips in the ground for their early spring sales, and those that have been thus exposed all winter, are sweeter and better than those dug in the fall. The property of the soil for extracting odors is so great, that a fishy duck buried in it over night may be cooked next day, and will be found to be free from this objectionable flavor. Dry cod-fish is often ameliorated in flavor by such treatment. Indeed, the clothes of those who have died of the plague may be worn by others, without the fear of communicating disease, after they have been buried in the soil a few hours.—*Working Farmer.*

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*For the New England Farmer*

## ESSEX AGRICULTURAL SOCIETY.

TRANSACTIONS FOR THE YEAR 1855.

This *Annual* is again before the public, in a neatly printed pamphlet of about one hundred and fifty pages, from the press of Messrs. Huse & Co., Newburyport. From a cursory glance at its contents, I think it will be found not less interesting than those which have preceded it;—and I know of no publication that is perused with more instruction. It emanates from the people, and contains intelligence of a practical character. If the farmers of the county had been as mindful of their own interests, as the officers of this society are for them, they would long ago have improved their knowledge of their honorable occupation. The truth is, farmers are slow to engage in new things. Their fathers have gone along through the world tolerably well, and they think they can get through by following in the same tracks—notwithstanding it may go *round* the swamp, and not *across* it. Farmers are not fond of railroad speed and lightning conductors—they hold that the sure way is the safest in the end. They may be right in this—but such is not the order of the day in other things;—and one may as well be out of the world as out of the fashion.

Great credit is due to the secretary, for looking up, preparing and putting forth such papers, and only such as will be found worth reading. What astonishes most is, that notwithstanding so much has been said and written on the culture of the soil, there is always something new to come. Essex is not a stock-growing county, and cannot be made such, any way you can fix it. We have no large herds of Devons, or Jerseys, or Ayshires, or Durhams, here, or interested editors to puff them. A few independent gentlemen keep a few fancy animals for their own use, but the mass of the animals, like their owners, are of the homespun order. Nevertheless we have seen as good butter in Essex, as any where else, notwithstanding it takes *two gallons* or more of milk to produce a pound.

ESSEX.

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☞ Oats take from an acre of land, ninety-six pounds of silica, or sand, twenty-two of phosphoric acid, six of sulphuric acid, twelve of lime, nine of magnesia, thirty-six of potash, four of soda, and six of common salt.

*For the New England Farmer.*

## CLIMATE MAKES THE PEOPLE.

MESSRS. EDITORS:—In passing through one of our American cities, especially the more southern ones, the traveller will be struck with the great variety of features he meets with in the streets; he will see every hue of complexion, from the ebony to the pallid white, as well as every degree of ugliness in features and form, up to fine symmetry and beauty; on inquiry, he will find that every nation on the globe has its representitives among the busy throng, which, rushing through the streets, pass each other unnoticed; also he will find the darkest colored ones are Africans, or descendants of Africans, from the hottest climate in the world, where the white race cannot propagate, and the others from climates corresponding to their complexions. The Africans show the effects the torrid climate they occupy has upon them, by their dark skins and frizzled hair which grows from their heated skulls. They, like the inhabitants of all warm climates, naturally feel that languor and lassitude which produces a dread of labor, and like savages, live on the spontaneous productions of the earth, and what chance throws in their way. The inhabitants of the south of Europe, the warmer parts of North and South America, Syria, and many other portions of the globe, from the same cause, lack that energy which is necessary to excel in agriculture, and if we may credit travellers, they are far behind the people in temperate latitudes in all that pertains to neatness, convenience, improvements in agriculture, and gardening, and, rather than strenuously assert their rights, tamely submit to the dictation and oppression of the most odious tyrants. The tendency of warm climates upon the constitution of man, is to lessen the energy of the physical faculties, and produce a sensitive irascibility, especially among the people of the United States, which is not always kept under that prudent control which would give the greater lustre to the character of the gentleman. The true determinate spirit of liberty never can be extinguished in the minds of the people of the temperate climates who have once enjoyed it. History tells us of the struggle between this and the mother country of a like people, which lasted for years, and subjugation was abandoned in despair.

Now let us view the contending nations of Europe, in a war between people of a like climate, of like knowledge, and a like determination of character and purpose, and who can help shuddering at consequences, that has not been familiar with atrocities. The struggle between such people bodes nothing short of a prolonged disastrous war; "where reason to restrain" is out of the question, and the unbridled passions of such people, let loose upon each other, what have we reason to expect but consequences of the most fearful kind? Here are people, equally yoked, contending; not the white man with the crouching black, modified by climate to become the supple slave, but people by reputation highly civilized and advanced in the improvement in every art relating to peace or war, and unless the spirit of the God of peace shall operate upon the minds of the people of those nations, to induce them to stay the improved diabolical missiles of destruction, the present winter, death and carnage will claim their victims in unprecedented slaughter.

The weather of the southern climes operates upon the natives like an anodyne, and by its debilitating effects unnerves them from undertaking mercantile or warlike expeditions in foreign lands, like the roving, restless, go-ahead people of the North, where the climate has fitted them with an instinct for rambling enterprises, and a curiosity to see "all the kingdoms of the world and the glory of them." The climate makes a difference in the people of our own country. We hear of the hardy sons of Maine entering the forests of the South and selecting and felling their better oaks for naval purposes, then transporting them home to be formed into ships, thence sent back again to the original owners of the forests to transport their rice and cotton to market. Why not build their vessels at home, without so much expense? The want of elasticity in the climate produces languor and a want of energy to accomplish such work. The people of southern latitudes can boast of their heroic exploits in war with nations enfeebled by climate like themselves, but how easily, generally, is their renowned valor and fight bragging put to check by a nation from the bracing skies of the North. Thus we see the people of the North more hardy laborers, more powerful warriors, more industrious farmers and mechanics, more enterprising merchants, and certainly, on an equality, if nothing more, as literary characters and statesmen.

*Wilmington, Mass.*, 1855. SILAS BROWN.

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## THE OLD OXEN.

A yoke of oxen, nearly 20 years old, were slaughtered by Madison Tuck, of Hallowell, on Wednesday, the 14th inst., (Nov.) an account of which may not be uninteresting, as they have been noticed by the press several times heretofore.

They were raised and kept on the same farm during their lifetime, and were, in course, the property of three successive generations. They were originally owned by Dea. Joseph French, of Chesterville, himself one of the pioneers of that region; were nearly 6 years old at the time of his death, and outlived him fourteen years. From him they descended to his son Isaac French, by whom, in connection with his son E. R. French, they were owned till the time they were driven to the market.

The latter, when a boy of eight years old, used to yoke the then year old calves, hitch them to his hand-sled, and drive about the barn-yard, and up and down the road, and has driven them more or less ever since.

They were calved the 7th and 14th of February, 1836, and consequently were 19 years and 9 months old at the time they were killed. They were what is called high-strung, high-mettled steers, hard to break, but when once broken, tractable and kind to labor, quick in their movements, and ready in an instant when the word was given. They were below the medium size, not girting 7 feet till some 12 or 15 years old, yet strong; the nigh one in particular never failing, when put to it, to either open his yoke or break his bow if the load did not go; thus breaking 6 yokes and several bows in 3 consecutive years.

The amount of labor they performed was immense. They have been from Chesterville to the Kennebec with masts, spars, or other ship timber, 345 times, averaging 50 miles to a trip, besides

about half as much other teaming in the same line of business to other places, making in all, at least 25,000 miles that they have travelled on the road since they were 5 years old. Their labor on the farm, logging, &c., was equal to more than twice the above amount; so that it may safely be said they have travelled in the yoke miles enough to measure the circumference of the earth at least 3 times.

The nigh one retained his vigor to the last, and, to all appearances, was as active and fit to labor as ten years ago. The off one failed rapidly after he was 18 years old, at which time he was lamed by some means in his hip, and, for a year past, has been unfit to perform any great amount of work. Had he been as active as his mate, they would have been kept some years longer.

In their appearance they resembled, in more respects than one, the old people whom we notice among us; comporting themselves with a kind of dignity and lofty bearing among the other animals of the farm, that betokened their age.

Their average girth at the time they were slaughtered, was 7 feet 2 inches, and their weight in round numbers, was 8 and 10 hundred, respectively; and this, too, they attained the past season without being stall fed.—*Drew's Rural Intelligencer.*

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*For the New England Farmer.*

## WILLOW CULTURE.

From what we have read in the various agricultural papers, and heard from miscellaneous sources, the idea has become quite prevalent in this vicinity that the willow may be set in any wet place and left to the mercy of the weeds and grass, without care or culture, and still "do well." Undoubtedly it will *live* and *grow* upon such fare, but is it not reasonable to suppose that, like all other plants, the better the cultivation, the better the growth and the more the profits—if any? Why not leave potatoes or corn without hoeing, because they will live when so neglected?

In passing many new plantations of willow during the past autumn, I noticed that the weeds and grass had wholly covered the precious thing from the eye, and even on a microscopic inspection, the far-fetched "cutting" can only be found to have sided out a poor feeble twig, nearly six inches long. No wonder the owners wish their money back again, and it will be a wonder if they do not eventually pronounce the thing a perfect *humbug*. They will denounce every thing for the common farmer, but the old line of corn and potatoes, and if agricultural papers and books are not favored with a wholesale curse, they may feel content, for they must walk out of my house, and atone for their want of common sense.

Instead of this, let every man who commences this new business, do it thoroughly, and take the same care, in kind, though less in degree, that he would of a young apple nursery. Let the ground be in order, and kept clean from weeds, at least during the first year. Commencing such an enterprise last spring, the thought occurred to me, why not have something to pay for all this care the first season? Accordingly the rows of willows were set 2½ feet apart, and a row of carrots sowed between each row of willows, and while hoeing the willows, the carrots were also hoed. The work was but little more than without the carrots, and the extra trouble of thinning out well paid by 160 bushels of good-sized carrots. The rows were about 8 rods in length, and averaged 4 bushels per rod.

In addition to the direct profit from the carrots, I consider the digging necessary to harvesting them, of considerable service to the next year's growth of willows. Where carrots would not do well, turnips might be set in place of them.

Dea. Parker, the owner of the successful willow plantation at Waterbury, Vt., assures me that good care pays as well upon the willow, as upon corn or potatoes. Hoping to hear from others on this subject, I leave the "*twig patch*" for the present.

*Randolph, Vt., Dec.*, 1855. G. F. N.

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## STATE BOARD OF AGRICULTURE.

*State House, Dec. 5*, 1855.

The meeting was called to order in one of the new rooms in the west wing of the building, by His Excellency, the Governor. Present:—Messrs. Tower, French, Sprague, Phillips, Chandler, Lewis, Brooks, Page, Parkhurst, Hubbard, Clapp, Bartlett, Wilder, Nash and Brown.

The first business was reading the proceedings of the last meeting by the Secretary, and then came the reports of the several standing committees, and first in order was that of the committee on Crops, by its Chairman, MARSHALL P. WILDER. The crops experimented upon were peas, potatoes, corn, onions, carrots, beets, parsnips, cabbages, turnips, oats, bromus, millet, rye. On these crops all the fertilizers usually resorted to were employed; common barn manure, superphosphate of lime, muriate of lime, guano, potash, leached ashes, coal ashes, poudrette. The time of application, the amount of each, the kind of soil and state of the weather were all noted by the Superintendent of the farm.

The manures were applied in exact values. If twelve dollars worth of barn-yard manure was applied, so the same value in guano, or any thing else, was applied, and the various fertilizers were given upon different portions of the same field, where there was no particular difference in the quality of the land.

The gentlemen to whom was assigned the duty of experimenting with manures, were Col. WILDER and Prof. NASH; at intervals of some weeks during the growth of the crops, springing from the manures which they applied, they visited them, and after careful observation noted their appearance. When the crops were gathered, they were both measured and weighed, so that the amount of land they were grown upon being known, the exact value of the manures used, and the quantity of crop obtained, it would seem that some facts of great practical value to the farmer should have been obtained. But such does not appear to be the case. For instance: The *same land* that produced one hundred and twenty bushels of potatoes last year,

upon a certain amount of guano, this year, with the same dressing, fell thirty bushels short! Who can account for this, especially when we take into consideration that the farm was more highly favored with seasonable rains in the summer of 1855, than in the summer of 1854,—it being generally conceded that guano acts more beneficially in wet than in dry summers?

The results, in all these carefully conducted experiments with manures, we regret to say, have been not only unsatisfactory, but contradictory, ending, thus far, in confusion and uncertainty, rather than leading to any well settled principles. The reports of these gentlemen are not yet completed, so that we can not state their precise terms, or draw inferences from them that would be of any value. When they are published, if not earlier, we hope to give the inquiring reader a better view of them.

The gentlemen who had the charge of experiments with *Stock*, were Messrs. Brooks, of Princeton, and Newell, of West Newbury. In prosecuting their trial of cows through a period of six months, the animals were weighed, morning and evening, at the expiration of each twenty days; their food was also weighed, the kind noted, and the average quantity given which was consumed, daily, during the twenty days. A table, similar to the one below was made out for each of the periods contained in the twenty days. This is given to show the results obtained, as well as the systematic mode of proceeding by the committee.

Statement of milk and food, &c., of cows, from Feb. 1 to Feb. 20, both inclusive, 20 days, 1855.

| NAMES. | Age of Cows. | Average weight, morning and evening, Feb. 19, 1855. | Average weight, morning and evening, Feb. 20, 1855. | Kinds of Food and average quantity consumed daily in 20 days. Hay. Lb. 100. | Straw. Lb. 100. | Corn Fodder. Lb. 100. | Carrots. | Cob Meal. | Daily flow of Milk. Average for 20 days. | Per cent. of Milk on Cow. Weight of Cow. | Days after Calving. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chamberlin, | 8 | 1017 | 1018 | 8.50 | 5.75 | 4.37 | 20.00 | 5.00 | 16.19 | 1.59 | 153 |
| Delia, | 8 | 1002 | 975 | 8.50 | 5.72 | 4.37 | 20.00 | 5.00 | 19.19 | 1.94 | 72 |
| Gentle, | 10 | 965 | 940 | 8.50 | 5.75 | 4.37 | 20.00 | 5.00 | 17.69 | 1.85 | 123 |
| Fanny, | 11 | 965 | 902 | 8.50 | 5.75 | 4.37 | 20.00 | 5 00 | 18.06 | 1.90 | 70 |
| Flora, | 6 | 968 | 922 | 8.50 | 5.75 | 4.37 | 20.00 | 5.00 | 28.56 | 3.02 | 59 |
| Rosea, | 10 | 975 | 930 | 8.50 | 5.75 | 4.37 | 20.00 | 5.00 | 27.31 | 2.88 | 53 |
| Haywood, | 10 | 944 | 926 | 8.50 | 5.75 | 4.37 | 20.00 | 5.00 | 19.31 | 2.08 | 69 |
| Spot, | 7 | 854 | 820 | 8.50 | 5.75 | 4.37 | 20.00 | 5.00 | 15.44 | 1.91 | 122 |
| Redneck, | 6 | 832 | 798 | 8 50 | 5.75 | 4.37 | 20.00 | 5.00 | 21.44 | 2.65 | 61 |
| Kendall, | 9 | 1117 | 1122 | 11.80 | 5.00 | 4.00 | | | dry. | | |
| Dolly, | 11 | 1207 | 1201 | 11.80 | 5.00 | 4.00 | | | | | |
| Star, | 11 | 1125 | 1162 | 11.80 | 5.00 | 4.00 | | | | | |
| Bounty, | 6 | 925 | 928 | 8.50 | 5.75 | 4.00 | 20.00 | 11.00 | 11.00 | 1.18 | 112 |
| Whiteface, | 6 | 733 | 710 | 8.50 | 5.75 | 4.00 | 20.00 | 21.37 | 21.37 | 2.96 | 64 |
| Redheifer, | 6 | 971 | 964 | 11.80 | 5.00 | 4.00 | | | dry. | | |
| Gentle, 2d, | 6 | 945 | 963 | 11.80 | 5.00 | 4.00 | | | | | |
| Cherry, | 6 | 955 | 961 | 11.80 | 5.00 | 4.00 | | | | | |
| Sawyer, | 6 | 1047 | 1030 | 11.80 | 5.00 | 4.00 | | | | | |
| Lady Devon, | 5 | 960 | 937 | 8.50 | 5.94 | 4.00 | 20.00 | 5.00 | 10.94 | 1.13 | 170 |
| Jenny Lind, | 2 | 702 | 653 | 8·50 | 5.75 | 4.37 | 20.00 | 5.00 | 15.75 | 2.32 | 50 |

The milk given by these cows in the thirteen trials of two hundred and sixty days, was sixty-one thousand two hundred and sixty-nine pounds, which cost five hundred and three dollars and nineteen cents, or eight cents and twenty-one hundredths (8.21) the gallon of ten pounds.

Average number of cows milked daily.....15.41
Average flow of milk daily.....235.65 pounds.
Average number of pounds of milk given by each cow daily throughout the two hundred and sixty days.....15.24 pounds.
Average number of days of giving milk after calving.....166¼

Reports were also made from the committees to whom were assigned the subjects of *Permanent Improvements*, *Labor*, and from the delegates sent to the several county societies. All these reports were subjected to a pretty thorough discussion, which in some cases demanded an analysis, or synopsis, of them, and several were recommitted for emendation, enlargement, or explanation.

In the afternoon of the second day, a most interesting discussion arose upon the propriety of the introduction of the trotting course into the show grounds, and its influence upon the general prosperity of the society, and on the morals of the people. The arguments presented were varied, ingenious and earnest, but pressed with that courtesy and dignity which has ever characterized the proceedings of the Board.

The following are the principal crops raised the past summer:

| | | |
|---|---|---|
| Peas | 15¼ | bushels. |
| Potatoes | 1647 | bushels on 12 acres. |
| Corn | 982 | bushels on 21 acres. |
| Oats | 286 | bushels on 10 acres. |
| Beans | 60¼ | bushels on 2 acres. |
| Carrots, 62 tons | 2480 | bushels on 5 acres. |
| Rye | 160 | bushels on 10 acres. |
| Turnips | 1000 | bushels on 2½ acres. |
| Hay | 56 | tons. |
| Onions | 461 | bushels on 1¼ acres. |
| Parsnips, Beets, &c. | 260 | |
| Cabbages | 4000 | heads. |
| Corn fodder | 30 | tons. |

The following propositions were submitted by Mr. French, from the Norfolk Society, and severally adopted:

*Voted*, That the Secretary be requested to invite such farmers in this Commonwealth as he may deem proper, to furnish to this Board the manner of their feed of cows, their weight, expense, and yield of milk for a given time; also the feed of oxen, their weight, expense and work at the time; also the feed of horses, the expense, their weight and work at the time, and also the breed of each.

*Voted*, That Messrs. French, Sprague, and Brooks, be a committee to consider and report to this Board what disposition of the rooms, now granted for their use, should be made, with a view to best serve the cause of Agriculture.

*Voted*, That Messrs. French, Brooks, Lewis, Brown and Sprague be a committee to consider, and report to this Board what measures, if any, are best adapted to serve the cause of Agriculture in this Commonwealth.

## WHY THE CAT DON'T SWEAT.

"Pa, does the cat ever sweat?"

"No, my son."

"Why, pa?"

True enough, thought I, why? The carnivorous animals have no perspiratory pores, as it is said; but this only helps over the first why, and we are stopped again by the next one. If it had been necessary for them to sweat, God would have given them an apparatus, as he has given to horses and cows in their skins.

"I think," said I, "it is because they eat so much lean meat."

Strange as it may seem, all animals that perspire get into a sweet to keep cool. When an ounce of water is converted into vapor, whether it has been sprinkled on the floor on a summer's day, or put on the fire in a green forestick, or spread on the surface of the earth in a dew, or exists in the form of perspirations on our bodies, or exhales invisible from our skin, or comes out of our lungs in breath, that ounce of water appropriates to itself, and destroys for all other purposes, a certain amount of heat. If animals sweat to get rid of excess of warmth, is there any connection between this process and the character of their food?

If we designate the surplus carbonaceous matter in the food, heat, and the nitrogenized matter, motion, we should have in beef, 1 lb. motion to 3 lbs. heat; in oats, 1 lb. motion to 15 lbs. heat; in hay, 1 lb. motion to 18 lbs. heat.

Now, observation shows that animals cannot use of the one of these elements, without disposing, in some way, of a corresponding amount of the other. Stage horses hard driven, if the weather be warm, grow poor—in common terms, they sweat off their fat. It is equally true, too, that animals in low flesh are weak.

As the food of herbivorous animals contains five or six times the amount of heat-producing materials—starch, gum and sugar—that exists in animal flesh, so that class are more sluggish in their habits than carniverous animals. Lions and tigers, though they have been consigned to a warm latitude, and covered in furs by a kind Providence, must roam to keep warm. It is for these natural reasons that they cannot brook the condition of captivity. Poetry has nothing to do with their restless habits when in cages; they are chilly from the inaction of the domestic condition.

Dogs and cats are very sensitive to cold. How Carlo shivers when he comes out of his house on a cold morning; and whines at the door; and puss, notwithstanding her full dress, never lies down to nap in a cold place. Neither of them can keep still in the cold. If they were to be stabled like cattle, and could be kept as still, it would kill them in a few days.

Although the horse, when fed on hay, has but one pound of motion to dispense of for every eighteen pounds of heat, he must work that off in order to enjoy warmth. After drinking on a winter morning, when he finds himself shivering, he prances and kicks for the fun of the thing, and by disposing of a little motion, is enabled, so to speak, to use eighteen times its weight of heat. How he snorts the blasts out of his furnaces!

When we notice the slight difference that is shown in this table between the analysis of hay and oats, and when we reflect on the difference in the performance of a hay-fed horse and one fed on grain, and when we compare these two items with the composition of flesh, we are led to conclude that horses could never be brought to feed on beef—and that we must put the flesh-eating horses of mythology in the same stall with centaurs.

But, on the other hand, if a horse is fed high, and is confined in cold weather, and the carbon of his food is used to keep him warm, the nitrogen will accumulate somewhere. He will get the gout from high living. Let him have exercise every day, if it is only by running in the yard.

The horse sweats because there is so much starch, gum and sugar in his food; while the cat does not because there is so little in hers. The starch, gum and sugar in the grass go to make fat with grass-eating animals; the cat gets but little fat in her food, and so God gave her furs, and lets her wear them all summer to keep her warm.—*Country Gentleman.*

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## MILK, BREAD AND BUTTER TREES.

We had heard several weeks before of a tree, the sap of which is a nourishing milk. It is called "the cow tree," and we were assured that the negroes of the farm, who drink plentifully of this vegetable milk, consider it a wholesome aliment. All the milky juices of plants being acrid, bitter, and more or less poisonous, this account appeared to us very extraordinary; but we found by experience, during our stay at Barbula, that the virtues of this tree had not been exaggerated. This fine tree rises like the broad-leaved star-apple. Its oblong and pointed leaves, rough and alternate, are marked by lateral ribs, prominent at the lower surface and parallel. Some of them are ten inches long. We did not see the flower; the fruit is somewhat fleshy, and contains one and sometimes two nuts. When incisions are made in the trunk of this tree, it yields abundance of glutinous milk, tolerably thick, devoid of all acridity, and of an agreeable and balmy smell. It was offered to us in the shell of a calabash. We drank considerable quantities of it in the evening before we went to bed, and very early in the morning, without feeling the least injurious effect. The viscocity of this milk alone renders it a little disagreeable. The negroes and the free people who work on the plantations drink it, dipping into it their bread of maize of cassava. The overseer of the farm told us that the negroes grow sensibly fatter during the season when the palo de vaca furnishes them with most milk. This juice, exposed to the air, presents at its surface (perhaps in consequence of the absorption of the atmospheric oxygen) membranes of a strongly animalized substance, yellow, somewhat resembling cheese. These membranes, separated from the rest of the more aqueous liquid, are elastic, almost like caoutchouc; but they undergo the same phenomena of putrefaction as gelatine. The people call the coagulum, that separates by the contact of the air, cheese. The coagulum grows sour in the space of five or six days. Amidst the great number of curious phenomena which I have observed in the course of my travels, I confess there are few that have made so powerful an impression on me as the aspect of the cow tree. Whatever relates to milk or to corn, inspires an interest which is not merely that of the physical knowledge of things, but is connected with another order of ideas and sentiments. We can

scarcely conceive how the human race could exist without farinaceous substances, and without that nourishing juice which the breast of the mother contains, and which is appropriated to the long feebleness of the infant. The amylaceous matter of corn, the object of religious veneration among so many nations, ancient and modern, is diffused in the seeds, and deposited in the roots of vegetables; milk which serves as an aliment, appears to us exclusively the produce of animal organization. Such are the impressions we have received in our earliest infancy; such is also the source of that astonishment created by the aspect of the tree just described. It is not here the solemn shades of forests, the majestic course of rivers, the mountains wrapped in eternal snow, that excite our emotion. A few drops of vegetable juice recall to our minds all the powerfulness of the fecundity of nature. On the barren flank of a rock grows a tree with coriaceous and dry leaves. Its large woody roots can scarcely penetrate into the stone. For several months of the year not a single shower moistens its foliage. Its branches appear dead and dried; but when the trunk is pierced, there flows from it a sweet and nourishing milk. It is at the rising of the sun that this vegetable fountain is most abundant; the negroes and natives are then seen hastening from all quarters, furnished with large bowls to receive the milk, which grows yellow, and thickens at its surface. Some empty their bowls under the tree itself, others carry the juice home to their children.—*Humboldt's Travels in the Equinoctial Regions of America.*

## THE SCALE INSECT OF THE APPLE.

Nearly every person who grows an apple tree, has observed that the branches of the older, and stems of the younger trees, are frequently covered with a minute scale, showing in general no appearance of life, and resembling nothing so much as a miniature oyster shell. This little scale is, however, an insect, and one of the many enemies of the apple, belonging to a family that contains more anomalous forms than any other. It is the *Homoptera* of Maclay. All this family are supplied with a suctorial mouth, arising so far back on the under side of the head as apparently to come from the breast in some species. The present insect is included in the genus *Coccus*, and has for its near relations, some that have been useful to man from the time of the ancients, producing valuable dyes, the cochineal being one of them; and it is calculated that in one pound of this dye there are 70,000 of these little insects. It feeds upon the cactus.

Our apple scale has, however, no qualities to render it useful; and a short account of its life and habits will be all that is necessary. When first hatched from the egg it possesses considerable ambulatory powers, and can crawl all over a tree and select a situation. It then inserts its *rostrum* into the tender bark and draws the sap, and such a constant drain, by the countless numbers found upon a tree, must be very injurious. The insect remains in this position until death in the female, undergoing its transformations, which, instead of producing a higher state of development, as in most other forms, has a contrary effect, it becoming, in fact, a mere inert, fleshy mass, in some allied species losing even the rudiments of limbs and all appearance of articulation. The male, on the contrary, however, who is much smaller, in casting off his pupa skin, obtains pretty large wings, and well developed limbs, armed with a single claw, and his mouth becomes obsolete; he then sallies forth in search of his partner, of which he sees nothing but the pupa envelope. The female afterwards becomes distended with eggs. She then gradually dries up, leaving the shell of her body for a covering to the newly hatched young, of which there are two broods in a year.

PREVENTIVE.—Harris, in his "Treatise on Insects injurious to Vegetation," recommends the following as a preventive: To two parts of soft soap, add eight of water, and mix as much lime with it as will make a stiff white-wash, and apply with a brush to the trunk and branches of the infected trees in the month of June, when the young insects are newly hatched. K.

REMARKS.—This is a capital description of the apple scale, by one of the most promising entomologists in Ohio.—*Ohio Farmer.*

*For the New England Farmer.*

## APPLES.

SEVERAL KINDS IN ONE TREE.

In grafting large trees, several varieties of scions are frequently employed in forming one new top; there are several objections to this practice.

Every one at all familiar with fruit trees, must have observed that each variety has a mode of growth peculiar to itself, and those who have had much experience can often ascertain the kind, when not in fruit, by this circumstance alone. Some varieties are vigorous and of rapid growth, others, are slow and unthrifty, and others of short duration and subject to decay early. A tree combining these discordant elements can possess little of symmetry or beauty, and the most judicious pruning cannot remedy the evil. For instance, a tree may be grafted with the Northern Spy, which is of remarkable upright growth; the Roxbury Russet, which is horizontal, or spreading, and the Spitzenburg, whose branches are drooping, or pendant. In a few years the scions clash and entangle, and it will be impossible to give them the proper form or direction, and when the tree comes into bearing the defect will be still more apparent. There is another objection to having more than one variety in a tree; it creates confusion in gathering the fruit, and where the kinds somewhat resemble each other, they are liable to get mixed, causing dissatisfaction among the purchasers. Where a person has but little land, and a few large trees which he is desirous to graft to other varieties for his own use, and who is willing to dispense with a good formed top, it may be justifiable to put several kinds into the same tree, but in extensive orchards it should be avoided.

*Leominster, Dec.*, 1855. O. V. HILLS.

REMARKS.—We call especial attention to this article. By observing its suggestions, a great many errors in the name of fruits, as well as a great vexation in the cultivation of them, may be avoided.

LUXURY OF THE ANCIENTS IN ROSES.—To enjoy the scent of roses at meals, an abundance of rose-leaves was shaken upon the table so that the dishes were completely surrounded. By an artificial con-

trivance, roses, during meals, descended on the guests from above. Heligoabalus, in his folly, caused violets and roses to be showered down upon his guests in such quantities, that a number of them being unable to extricate themselves, were suffocated in flowers. During meal times, they reclined upon cushions stuffed with rose leaves, or made a couch of the leaves themselves. The floor, too, was strewed with roses, and in this custom great luxury was displayed. Cleopatra, at an enormous expense, procured roses for a feast which she gave to Anthony, had them laid two cubics thick on the floor of the banquet room, and then caused nets to be spread over the flowers, in order to render the footing elastic. Heliogabalus caused not only the banquet rooms, but also the colonades that led to them, to be covered with roses, interspersed with lilies, violets, hyacinths, and narcissi, and walked about on this flowery platform.

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*For the New England Farmer.*

## THE LATE FREDERIC HOWES, ESQ., OF SALEM.

BEFORE THE BOARD OF TRUSTEES, DEC., 1855.

MR. PRESIDENT:—Since the last meeting of this Board, one of the oldest and most distinguished of our number,—one who was prominent at the start, and has enjoyed the highest honors of the association,—has "passed that bourne, whence no traveller returns." It is fit, in conformity with established usage—it is fit, in consideration of the merits of the deceased, that a respectful and truthful notice should be inscribed to his memory.

FREDERIC HOWES was born in the town of Dennis, County of Barnstable, 1782; and died at Salem County of Essex, 1855; aged 73 years. When young, he removed with his father to Ashfield, County of Worcester, where he learnt his first lessons in farming, and imbibed that taste for the culture of the soil, which was uppermost in his thoughts through life. Mr. Howes possessed a sound, discriminating mind,—an ardent desire for knowledge; and a perseverance of effort, that would not allow any subject, to which his attention was directed, to pass imperfectly understood. He examined closely, and was not satisfied with superficial observation. His opinions, therefore, when formed, were entitled to respect. He pursued his studies at Harvard University; but unfortunately, (in the year 1807, when many of the young men there thought they knew better than their masters,) he did not receive a degree on leaving the institution. Not that *a degree*, in itself, is of any value, but because the deprivation of it is oftentimes a source of uneasiness and mortification;—and so in after life he often felt it to be; notwithstanding he ever felt, that the authorities of the College made a mistake, in pursuing the course they then did.

Mr. Howes was educated to the profession of the law, in the County of Middlesex; and entered upon the practice, at Salem, in the County of Essex; at the same time having his home in the adjoining town of Danvers. Such was his reputation among those who knew him best, that he was repeatedly chosen, to represent them in the General Court. By nature diffident and unassuming, he was not the man to crowd himself where he was not fitted to be. He was one of the earliest founders and officers of this Society; and at all times, its constant and devoted friend. He labored without ceasing through good and evil report, never faltering or hesitating where any service was to be performed.

It is no small honor, for Mr. Howes, to have been designated by the discriminatiug mind of TIMOTHY PICKERING as most worthy to succeed him in the Presidential Chair. The manner in which he discharged the duties of this station, for several years, until he voluntarily withdrew, is well remembered by some still here, with locks bleached with much service. To say that he *filled the place* that had been occupied by his distinguished predecessor, for *ten years previous*, is what no son of Essex will ever presume to say. *Primus inter pares*,* will ever stand the name of PICKERING, the friend and confidant of WASHINGTON. But, to say that he discharged all the duties that devolved upon him, with fidelity and care, is certainly true. The lessons of instruction communicated by him, will be found on the pages of our journals; and will continue to be referred to with increasing respect.

Mr. President, I have said enough, perhaps more than enough, to impress upon the minds of all, the propriety of the act in which we are now engaged. *Thirty-seven years*, and more, have passed away since the organization of this Society. A few of the founders only remain to tell the story. A few years more, very few indeed, and all will be gone; and "the places that knew them will know them no more forever." When thus admonished, it becomes us to pause for a moment, to consider "what shadows we are, and what shadows we pursue." On the same day, and about the same hour, that I heard of the death of my venerated teacher and friend, I was called to part with one, to me most dear, in my own household. All nature proclaims aloud that we must die. No one can more fully appreciate this truth, than the intelligent, reflecting farmer. A man may pass through life in splendor and affluence; but when death comes, there is no distinction between the laborer and the lord of the manor. Here all are on the same level, however they may have been born. Here it is that fame and renown cannot assist; that even the devotion and sympathy of friends cannot save. Here it is that the relations of the creature to the Creator, are irresistibly forced upon our consideration. Happy are those who meet the closing scene of life with that calm and confiding trust in the mercy of God, which characterized the last hours of our departed friend.

In view of these considerations, I respectfully ask of the Board, to lay aside the cares of the world for a moment; and to adopt the following Resolutions.

1. *Resolved*, That the members of this Board have heard with deep emotion of the death of Frederic Howes, Esq., the oldest surviving honorary member of the Board.

2. *Resolved*, That the amiable virtues, devotion to duty, and sound learning, that so eminently characterized the deceased, present a model to all worthy of imitation.

3. *Resolved*, That the Secretary be instructed to communicate to the widow and family of the deceased, a copy of this expression of the feelings of the Trustees, and that the same be published in the Transactions for the year.

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* The first among his equals.

## HOMES FOR THE PEOPLE.

As proposed some time since, we now give one of several plans of houses, which we think will afford many valuable suggestions to those who are about to build. And those contemplating building should study. No one is safe in erecting expensive buildings, unless he has given considerable thought and examination to the subject. He should refer to books, converse with those who have experience, and make personal inspection of buildings that come somewhat near that which he proposes to erect. In this way, he will be able to prevent annoying and expensive alterations, and find his house constructed upon correct principles, and affording the conveniences at once that he desires.

So far as expense is concerned, it is as unwise to erect a house without careful study and deliberation, as to construct a ship upon the first model that chances to lie in the way. Want of original design will give a dwelling, without architectural taste or skill, with awkward and contradictory roofs and gables,—with smoking chimneys, and blind passages leading the unwary headlong down the cellar stairs,—with doors opening against each other and battering themselves like a pair of young rams, with basements mouldy and dank, and the general appearance of the whole establishment indicating that it was *thrown together*, rather than constructed upon any well settled principles.

Such a dwelling would stand as a perpetual reproach to its proprietor, a never-ceasing annoyance to the family doomed to occupy it,—and the nursery of ill-humor and discontent.

The plan presented below is from "*Homes for the People*," by GERVASE WHEELER, Esq., Architect, N. Y., and published by Charles Scribner, of that city.

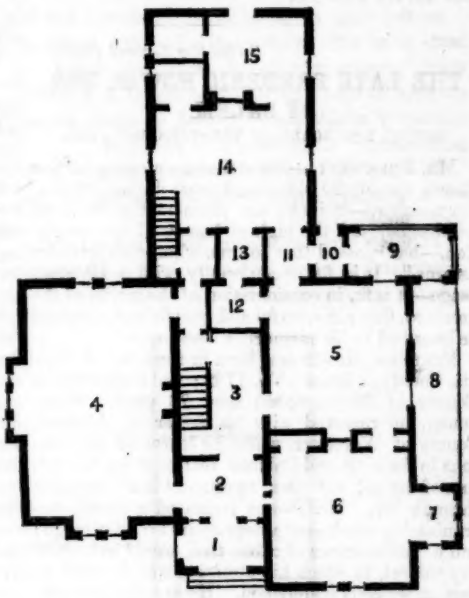
This plan represents a building somewhat irregular in form, yet compelling to no waste of space in its internal arrangements. The principal entrance is made by means of an open porch marked upon the plan, No. 1, which protects the hall door opening into an entry, No. 2, between which and the inner hall, No. 3, is a screen filled with glass and double doors. This hall is nine feet wide. On one side is a large drawing-room, No. 4, which is about thirty feet long and sixteen wide, with projecting bay-windows in the front and upon one side.

Upon the other side of the hall are a dining-room, No. 5, and family parlor or library, No. 6. This latter room has a peculiar feature in the deeply imbayed window, or rather wing, No. 7, which is sufficiently large to make a pleasant little retreat for quiet reading or writing. Its window on one side opens upon a covered terrace, No. 8, the end of which is terminated by a small conservatory, No. 9, a view into which can be obtained from the projecting bay in the parlor.

Connected with the conservatory is an entry, No. 10, which communicates with the domestic offices, and is also a means of exit to the garden.

No. 11 is a passage connecting dining-room and kitchen, provided with shelves, and other conveniences that permit it to be used as a serving-room during meal times.

No. 12 is the store and china closet, connected with the dining-room, and 13 is one of similar intention, connecting with the kitchen, having a sliding door between them for passing the contents one from the other. All these useful features for domestic conveniences are of ample size.




PLAN OF PRINCIPAL FLOOR.

No. 14 is the kitchen, conveniently near the main body of the house, and yet so shut off, by means of double entries and other separation, as to be no annoyance. This room is sixteen by fourteen. From it leads the servant's stairway, to the floor above, under which is also a flight leading to the cellar below.

No. 15 is the laundry and scullery; connected therewith is a store closet, and next to it (opening into the kitchen) one for use of the cook. In the laundry is an outside door leading to the yard and stables, which may be planned, and as much room given, as the wants of the family require.

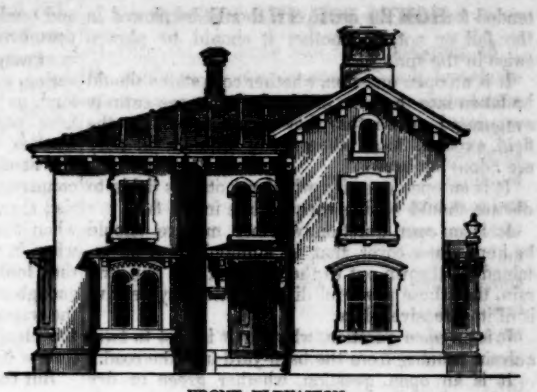
Underneath the whole of this floor is a cellar seven feet high in the clear, containing vegetable, milk and store-rooms, as also receptacles for coals, and space for the furnace.

The distribution of the space upon the chamber

floor is thus made. No. 1 is the upper hall, lighted by a dome overhead, which is inserted in the attic floor, and illuminated by glass level with the roof, in such a manner as not to be observed from outside the building.

On one side are large chambers, 2 and 3, over the drawing-room; No. 2 being designed for family use, and having connected with it a large closet.

In front is a smaller room, No. 4, over the entrance porch. No. 5 is over the family sitting-room, and No. 6 is above the dining-room. Each of these rooms has abundant closet provision, as the plan will show.

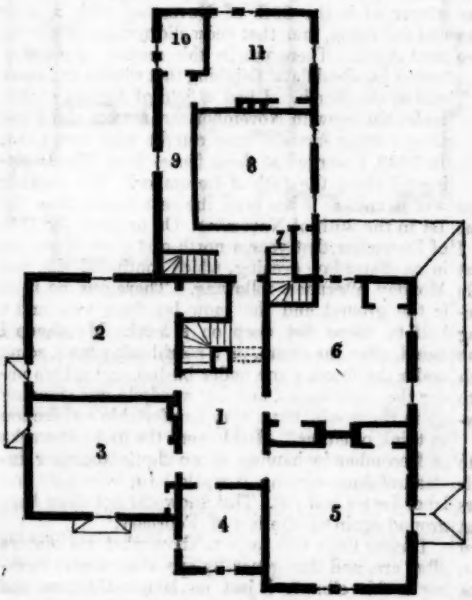


FRONT ELEVATION.

In the wing of the building, a stairway, No. 7, leads to an attic overhead, the partition inclosing which projects into the chamber, No. 6, and to conform to which, on the other side of its window, a closet of similar size is framed, by which means the symmetry of the chamber is preserved.

No 8 is a chamber of liberal size, connected with which is a large closet, beside the stairway to the attic.

No. 9 is a corridor, leading from the head of the private stairway to a bathing-room, No. 10, and a servant's sleeping-room, No. 11.




CHAMBER FLOOR.

In this portion of the building the walls are eight feet high to the top of the plate, the ceilings following up the rake of the rafters so far as to permit a straight ceiling of about ten feet, or even more, in the highest part of the room.

The rooms, in the main part of this building upon the chamber floor, are nine feet high in the clear.

The elevation of the principal front consists of a gabled projecting portion, forming the main mass of the building, and which is higher than the rest of the edifice. This contains the family-room, dining-room, &c., and has an attic above its chamber floor, lighted in front by a circular-headed window, in the gable-end, and by a similar window in the rear. Cost about $4000.

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*For the New England Farmer.*

## OPEN QUESTIONS AMONG FARMERS.

Probably, in no human pursuit, are there so many unsettled and contradictory usages, as among the agriculturists. Other professions have their thoroughly-settled principles, and these are regarded as axiomatic truths—as the *basis* of further advancement, and of definite, practical results. Richard Cecil tells us, that when he had once thoroughly examined any question in theology or morals, and had made up his mature opinion upon it, *he put that question on the shelf*, as one never to be opened again. And the lawyers have their *"res adjudicata,"* or principles which have been adjudicated and forever settled. But how few are the modes of farming among us which have been "placed upon the shelf."—How few of our farmers have their *"res adjudicata"*—their well-settled, uniform practices.

Let us see how this matter stands. It is yet an open question among farmers, whether the *Ayrshire*, or the *Devons*, or the *Durhams*, or the *Herefords*, or even the *natives*, are the best cows for milking purposes.

It is an open question among them, whether the *Suffolks*, or the *Essex*, or a mixture of breeds, make the most profitable swine.

It is an open question what kind of potatoes it is best to cultivate, and whether the seed should be large or small, and whether it should be cut or uncut.

It is an open question, whether corn should be topped, or cut up by the roots.

It is an open question, whether common plowing, or deep plowing, is, on the whole, the best.

It is an open question, whether sward land, in-

tended for corn the next year, should be plowed in the fall or not, or whether it should be plowed twice in the spring.

It is an open question, whether corn stalks should be taken into the barn before the juices are entirely evaporated, or whether they should remain in the field, exposed to all the rains of autumn, till they are "done up brown."

It is an open question whether potatoes liable to disease should be dug early or late in the fall.

It is an open question, whether manure should be kept under cover, that its ammonia may be retained, or thrown out to the action of the sun and rain, that those powerful disinfectants may deprive it of its offensive odors.

It is an open question, whether it is best to have a drain running from the barn-yard into the road.

It is an open question, whether green or dry wood makes the best fire; but when the mercury is ten degrees below zero in the morning, there is little doubt in the mind of the "hired girl" who is compelled to make it, which she had rather have provided.

It is an open question, whether it will pay to dig and cart meadow mud, and compost it with stable manure for the crops next spring.

It is an open question, whether guano or artificial manures, at their present high prices, can be profitably used in New England.

And, finally, it is an open question with many of the tillers of the soil, whether they ought to take the *New England Farmer*, and with some who now take it, whether they ought to *pay* for it.

Here, Messrs. Editors, endeth the present communication, for I have not the time, nor you the space, this week, to consider what can be done to settle these and many other questions, which are yet *open* among the farmers of our country.

*Waltham, Dec.*, 1855. D. C.

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*For the New England Farmer.*

## FARM WORK FOR WINTER.

MR. EDITOR:—In the *New York Tribune* of the 24th ult., there is an article on this subject, and as it is addressed to the farmers of the country, I propose to examine the ideas advanced. In the first place, they assert that farmers in the country are in the habit of hiring help of both sexes, in large numbers, from the city through the busy season, paying them only such wages as will sustain them for the time, and then turning them adrift on the approach of winter, and they make their way back again to the city to starve or live on "soup" at public expense and charity till spring.

Now that there are many laborers that go into the country from the city in the spring season, is probably true; and that many of these laborers seek work among the farmers is also true; but that the great majority of such help is just the poorest help the farmer can have is more true still. But owing to the extreme scarcity of Yankee help, the farmer is obliged to hire this foreign help, which, in some cases is good; in the majority of cases it is unskilled and awkward in the extreme. But that such help invariably make their way back to the city again at the close of the busy season, to winter, I want more proof of. So far as my knowledge goes, when these laborers are discharged from the farm, they generally seek employment in the manufacturing villages and towns, to work as waiters and tenders in the shops, coal bearers, wood sawyers, livery stables, &c. I much doubt whether one in twenty of such laborers who leave the city in the spring, to seek work and get a hundred miles inland, go back to the city again to winter, unless they have parents or relatives to receive them. The truth is, these hordes of lazy beggars that infest the city at all seasons of the year, never go into the country at all to any extent, unless they are carried there by main force. This fact is plain to us, when it is known that such people very seldom beg when in the country at any season of the year, but they look around for something to do to earn enough at least, to keep soul and body together, till the warm season opens again. The great object of this class is, to live to-day and let to-morrow take care of itself.

But the *Tribune* says, "if a farmer cannot afford to pay wages in the winter, he can afford to feed his summer laborers, and he should do so instead of discharging them, and sending them back upon the city. It is a mistaken notion that a farmer cannot find employment for laborers in winter. In this latitude, one-half the days of the winter months are good working days, and with very slight exceptions, there should be no lost time." Now, what are the facts in regard to farm labor during winter? Many farmers know well that in a latitude between 40° and 50° North, that very little or no practical farm labor can be done between the first of December and the first of April. There will be years when mild weather will hold out till the 15th or the 20th of December, but they are only exceptions, and not rules. In 1835-6, or twenty years ago, this season, winter set in the 20th of November with a snow and ice storm, and that snow did not go off till the next April. There was in this section of country over a hundred days' sleighing that winter, and more still at the North. I had a field of turnips caught under the snow in November that season, and I lost them; other farmers were caught with crops out. In 1839, I worked at farm fences from Thanksgiving till about the 15th of December. The weather was as mild as it has been the past season from the 1st to the 20th of November. On or about the 15th of December that year, a north-east snow storm set in on Saturday evening, which continued till late Monday afternoon following. There was no frost in the ground and the snow lay from two and a half to three feet deep on a level. My sheep I found, after the storm, on a neighboring farm, some under the fence, some under bushes, and others under the snow-banks, and my woodpile was standing up in the woods, not a very comfortable satisfaction to think of either. Had I spent the first two weeks in December in hauling a wood-pile together instead of fence-making, it would have been time and labor better laid out. That snow did not show bare ground again till the last of February.

I name these two cases to show what our winters often are, and that generally speaking, winter farming in this climate is just no labor at all on the farm. November is a good month to finish off farm work. Crops—with the exception of turnips—should be secured in October, and as early in November as convenient. During November, trees may be transplanted and late fall plowing may be done. Stones may be dug up in the fields, and large rocks blasted out with powder. If a light snow should fall, large stone and rocks may be removed on a stone sled or drag, to a good advantage, to the

fence line. But then no dependence can be placed on this labor in such constantly varying weather. After winter sets in with frost, no wall-laying or fence-building can be done to any advantage, as it requires the ground clear of frost for such business.

The writer in the *Tribune* says again—"Most of the fence building should be done in the winter, yet it is a kind of work that is much neglected, because unnecessary to restrain cattle. We contend that no barn should ever be built without a cellar, yet ninety-nine of every hundred are so built. To remedy this, go to work in winter and dig and wall your barn-cellars. As soon as this is done, go to the nearest muck bed and dig a cellar in that, and haul a portion of it to your new barn-cellar to compost with your manure heap. Hauling manure is another part of winter work, but mind and not drop it in little heaps to bleach and soak through snow and rain. Pile it up as much as possible to shed rain, in some convenient spot to haul upon the field where you want it."

Generally speaking, barn-cellars should be made under barns, though there will be exceptions to this rule. A gentle elevation or knoll of gravel, where it can be had, should be dug out for a barn-cellar. This will make the cellar dry and airy, leaving the mouth of the cellar to face the south, th bottom of the cellar to set on or near the level with the surface below. If the situation of the land for the building is on or near a level, and the soil inclined to wet and dampness, then the barn-cellar should be pretty much above ground. But then, instead of digging and stoning barn-cellars and building barns in the winter season, the time to do this is in early summer, after the spring hurry of work is over, having the buildings ready for the hay and harvest crops. The timber should be prepared and hauled the previous winter, and other materials should be got together as much as can be. Digging out muck in the winter season, is a work at which little can be done, but it may and should be attended to in the fall, previous to winter setting in. Where draining is done in the dry season, the refuse muck should be carted into the barn-yard and piled away in the cellar for winter use to mix with manures. As to hauling manure in the winter season out of the barn-yard on to the fields, it is a poor business, being well followed by few farmers. The composting of manures in the field during the winter season, will not amount to anything, all the materials, both muck and manure, being in a frozen or half-frozen state; ditto, the farm laborers.

The better way is to keep all the manure in the yard, hog-pens and barn-cellars till spring, taking care that the manure does not heat and fire-fangle by using plenty of muck with it in the course of the winter. Manure may be carted out and composted on the field where it is wanted late in the fall, before cold weather sets in, as it may be spread and turned in with the plow to lie till spring. As to digging wells in the winter, I dug one some years ago in December, and when finished there was some five feet of water in it. The next spring, in May, the water all run out at the bottom, and there has never been any water to stand any length of time in that well. I made up my mind before I dug the next well it would be in August or September, when the springs are at the lowest point.

For barn-yards, running water is the best, if it can be had naturally, or it may be raised by a water-ram or wind-mills. Where running water cannot be had, a cistern should be dug in the yard; one that will hold one hundred barrels or more should be provided, and then all the water falling on the farm-buildings should be conducted into the cistern. Cisterns are much preferable in some yards to wells or pumps of any description; and the cisterns should be built large enough to hold out through a month or a week's drought, with an occasional shower to replenish it. A good cistern is also indispensable for the kitchen, unless you can have soft running water.

It will be seen, then, to sum up, that the amount of farm labor proper, that can be done in the winter, is very small in this cold climate. Where the weather is mild and the ground bare, something may be done at cutting bushes and trimming up woodlands. But of course, no dependence can be placed on the weather; you may have one or two days in a month for this business, and you may have none at all. If you have a swamp of wood and brush that you wish to cut over, it may be done after the swamp is well shut up with frost. Wood for the winter and coming summer may and should be cut and carted or sledded home when there is snow. Also, rail and fence timber may be cut and delivered on the lines of fences where it is wanted for spring work. Saw logs and heavy timber may be cut and delivered to the mill when there is a good body of snow on the ground. Also, where farmers cut and deliver wood for market, a load of wood may be carried to the town or village, and a load of manure brought back, which can be put in the hog-pen, barn-yard or barn-cellar, as may be.

Very few farmers will have work for the same number of hands in winter that they can employ in summer, in this climate, yet one or two hands may often be employed to good advantage. Between latitude 40° and south of that, or the southern parts of Pennsylvania and New Jersey, with Delaware and Maryland, this same work through winter may be carried out in part, while down in Southern Virginia, and south of that, it may be carried out in full, making leeway for stormy weather. Next, all farmers may have an ice-house, and all that can, without carting it at too great a distance, should build a house in late fall or early winter, and then three or four days in a week may be spent when the ice is of right thickness, in cutting, carting and filling it. A farmer may, on the principles of charity, keep his farm laborers over through the winter; but very few or none of the farm laborers that are worth anything would stay and work for board without wages, while those who would stay for board would only do so for the time being. And, finally, it is much easier to give advice to farmers on such matters as farming in winter, than it is to have that advice worth much to practical men. For of what avail is such advice, unless it can be made practical to farmers themselves?

*Derby, Ct., Dec.*, 1855. L. DURAND.

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TRIMMING FRUIT TREES, GRAPE VINES, ECT.—Those who neglected to trim their grape vines in November, may do so this month. It is a much better practice than to trim them in the spring. Many fear to do so, because, when so trimmed, they occasionally find dead wood in the spring, and imagine that it is consequent upon the exposure of the ends of the branches where trimmed. This, however, is not the fact. Inexperienced hands

sometimes trim unripe wood, instead of removing it, and this, of course, dies down during the winter, which it would do whether trimmed or not. Trimming at this time prevents bleeding in the spring, and it also saves that portion of pabulum which would arise in the spring from the roots, into the removed parts, thus giving greater vigor to fall-pruned vines. We have tried this experiment fully, and are satisfied that grapes grown on vines pruned in the fall, ripen earlier than on those pruned in the spring.

The trimming of fruit trees should occur a week before mid-summer, but if neglected at that time, they may be trimmed now. The exposed ends, however, should receive a slight coating of mastic dissolved in alcohol. The alcohol will pass off by evaporation, while the mastic will render the exposed portions water proof. The coating will be so thin as not to prevent the closing over of the bark by future growth, while the wood will remain bright and clean, instead of becoming dotted, and permiting the bark to close over a decayed portion.—*Working Farmer.*

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*For the New England Farmer.*

## THE HORSE DISTEMPER.

On the Disease now Prevailing among Horses—Typhoid Influenza—Its Nature—Symptoms—and Terminations.

There is a disease now prevailing among horses in this State, which in stable language passes under the familiar terms, *horse-ail, pink-eye, distemper*, &c. &c. It seems to prevail most extensively among what are termed *coarse-bred* horses, such as are used in the trucking business, or any other laborious work. In fact, a case occurring in a well-bred horse has not yet come to my knowledge. In some localities it spreads after the manner of epizootic, enzootic, and sporadic affections; appearing here and there in certain localities, with greater or less intensity; sometimes singling out half a dozen horses, out of a stable of twenty; at other times, and perhaps in a contiguous atmospheric locality, it runs through a whole stable of the same.

At the present time there are a great number of truck horses laid up with this typhoid affection; a great proportion of them are doing well, and up to the present there have been very few deaths. So that there is no foundation, in *fact*, for the unfavorable reports that are now circulating.

I have named the disease typhus, because it appears under the form of persistent fever, marked by great debility, and gastro-intestinal symptoms; and two *autopsies*, that I have been permitted to make, revealed the usual evidences of a typhoid affection.

### SYMPTOMS OF THE DISEASE.

It generally commences without any other warning than a little weakness and loss of appetite; soon the animal becomes so weak that on urging him to walk across the stable, he reels as in delirium, and if hurried, or handled roughly, he is liable to fall. The sclerotic and conjunctival membranes of the eye are reddened, yet present a yellow tinge. The eyes and eyelids have a languid appearance, resembling those of a horse laboring under influenza. The membranes of the mouth are also reddened, yet have a more marked tinge of yellow than those of the eye. The tongue is generally coated, with a white or brown fur, and the breath is fœted. This yellow tinge of the surfaces is indicative of functional derangement of the liver. The membranes of the nasal passages are congested, and sometimes we have a slight discharge of viscous matter from the nostrils.

The respirations are more or less laborious and accelerated, and the least muscular movement will augment both arterial and respiratory actions. On applying the ear to the trachea, a sort of mucous rale will be heard; there is generally some soreness of throat; enlargement of the thyroid glands, accompanied by slight cough.

The pulse is almost always irregular and feeble; the nose, ears, limbs and tail, are cold: the urine and fæces are both scanty and fœtid.

Such are the prominent symptoms of this disease; they may vary both in duration and intensity, but the symptoms as above described are generally present during its early stage. As the disease progresses, we have a complication of disease within the abdomen and thorax, and the patient is afflicted with excruciating torment, indicating inflammation of the gastro-intestinal surfaces, and he exhibits the usual symptoms manifested by horses when laboring under gastro-enteritis.

At this stage, the disease, if properly treated, may take a favorable turn; some mild cases, however, are marked by an absence of *enteritic* symptoms; in either case, the animal may be troubled with a cough, yet gradually recovers.

The disease is apt to run on to the last, or putrid stage, in animals of inferior vital resistance, whose constitutions have been shattered by previous disease; and horses, also, in a state of plethora, unless they have been under active treatment, are in the same predicament; while the disease, if seen early and properly treated, can be cut short. There is one curious circumstance that has been noticed, and that is, various forms of disease, differing essentially in their symptoms from the above, are apt to merge into a typhoid affection. So that horses at the present time, showing any symptoms of illness, ought to receive early attention.

George H. Dadd,
*Veterinary Surgeon.*

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*For the New England Farmer.*

## THE STRIPED SQUIRREL.

Mr. Editor:—I noticed in the *Farmer* of the 10th, a paragraph giving a description of the manner in which the striped squirrel digs his hole in the ground. Your correspondent says that naturalists, and every intelligent farmer, ought to know that he carries away the dirt in his cheeks, and goes on to prove it. Now sir, he must be very much mistaken, or chitmucks differ in New Hampshire from those in Massachusetts, in respect to digging their holes. This squirrel commences his hole, and digs in a slanting manner till he reaches a depth below the frosts of winter; there he digs a basin, or room, large enough for himself and a deposit for his winter stores—then he digs straight up to the surface, and fills up the hole where he first commenced. As a proof of this I have dug them out of a new burrow, found their store of corn, chestnuts and acorns, and followed out their hole to where they first begun, and there I found their pile of dirt. One burrow undisturbed will last for years. J. H. Whitney.

*N. E. Village, Nov.*, 1855.

*For the New England Farmer.*

## REPLY TO "R. E. G."

BY THE "PEASANT BARD."

I read your lines, my unknown friend,
From the beginning to the end.
Not half the verse that's now-days penn'd
Is worth the reading;
Scarce could the subject, e'en, be kenn'd
But for the heading.

But, sir, I'll bear you witness now,
A man may guide the plodding plow,
With hands like horn, and sweaty brow,
Rugged and strong,
And yet all gloriously endow
His day with song.

Thanks for your kind inquiries;—I
Will scribble something in reply,
Although small time, just now, to try
The fine or funny;
For I'm as busy as a fly
O'er pot of honey.

I'm well, thank HIM who has our keeping,
And who, we're told, is never sleeping;
In fact, if all, like me were reaping
Hygeia's plains,
The "faculty" would all be weeping
In doleful strains.

You ask:—"Potato-digging loon,
How cams't thou by so rich a boon,—
Namely the MUSE'S golden spoon—
At which folks stare?"—
How came we by the sun and moon?
Don't know;—they're *there*.

"What do I feed upon?"—In chief
The best of cabbage, pork and beef;
Potatoes, also;—to be brief,
Just come and see,
Indulging ever the belief
I'd welcome thee.

"My drink?"—Good friend, 'dye ever see
A Temp—(*hic*!)—rance So-ci-e-ty?
Down with your name, and give that "spree"
A fair acquittal;
You're answered!—sober men, like me,
Are non-committal.

My sympathies I freely spare
For all your farmer's toil and care;
I knew full well just what they are,
E'er you made mention.
I've done hard work enough to share
A lib'ral pension.

O! had I lived when last was blown
War's trump, and down our gauntlet thrown
At Britain's foot; had I but known
Two week's *parade*,
As fine a "section" I might own
As God e'er made.

But, with enough, who should complain?
Pipe with me, friend, a cheerful strain,
Long live the FARMER, shout amain
With pow'r of voice;
Be the *Lieutenant* yet again
The people's choice!

Attention! brothers of the Plow.
File front!—I mark each "soger" brow;)
Halt! Dress!—before no king ye bow
With knees a slappin';
No, sirs! but all attention! now—
Salute your captain!

*Gill, Nov.* 26, 1855.

## BIOGRAPHY.

We present, to-day, in another part of this number, a short biographical sketch of FREDERIC HOWES, Esq., of Salem, late President of the Essex County Agricultural Society. This tribute to the memory of a good and useful man was adopted by the Board of Trustees of the Society upon motion of our attentive correspondent, JOHN W. PROCTOR, Esq., of Danvers.

Similar sketches of the lives of those who have cherished and promoted the cause of agriculture will be useful in several respects: they will recall their virtues, for us to copy; relate to us their principles of culture and their modes of operation, and tend to inspire us with the same zeal and energy which actuated them. We hope, therefore, that our correspondent, and others who have the means at hand, will favor us with concise sketches of persons who have been eminent in promoting the interest which we believe to be at the root of our national prosperity.

## PHOSPHATES—THEIR USE.

The following letter from Professor Liebig on the value of phosphates, cannot be too often read by those who would understand the more important facts connected with agriculture:

MY DEAR SIR:—My recent researches into the constituent ingredients of our cultivated fields have led me to the conclusion that, of all the elements furnished to plants by the soil and ministering to their nourishment, the phosphate of lime, or rather, the phosphates generally, must be regarded as the most important.

In order to furnish you with a clear idea of the importance of the phosphates, it may be sufficient to remind you of the fact, that the blood of man and animals, beside common salt, always contains alkaline and earthy phosphates. If we burn blood and examine the ashes which remain, we find certain parts of them soluble in water, and others insoluble. The soluble parts are common salt and alkaline phosphates; the insoluble consists of phosphate of lime, phosphate of magnesia, and oxyd of iron.

These mineral ingredients of the blood—without the presence of which in the food, the formation of blood is impossible—both man and animals derive, either immediately or mediately, through other animals, from vegetable substances used as food; they had been constituents of vegetables, they had been parts of the soil upon which the vegetable substances were developed.

If we compare the amount of phosphates in different vegetable substances with each other, we discover a great variety, while there is scarcely any ashes of plants altogether devoid of them, and those parts of plants which experience has taught us are the most nutritious, contain the largest proportion. To these belong all seeds and grain, especially the varieties of broad-corn, peas, beans and lentils.

It is a most curious fact, if we incinerate grain or its flour, peas, beans and lentils, we obtain ashes, which are distinguished from the ashes of all other parts of vegetables by the absence of alkaline car-

bonates. The ashes of these seeds, when recently prepared, do not effervesce with acids; their soluble ingredients consist solely of alkaline phosphates, the insoluble parts of phosphate of lime, phosphate of magnesia, and oxyd of iron; consequently, of the very same salts which are contained in blood, and which are absolutely indispensable to its formation. We are thus brought to the further indisputable conclusion, that no seed suitable to become food for man and animals can be formed in any plant without the presence and cooperation of the phosphates. A field, in which phosphate of lime, or the alkaline phosphates, form no part of the soil, is totally incapable of producing grain, peas, or beans.

An enormous quantity of these substances, indispensable to the nourishment of plants, is annually withdrawn from the soil and carried into great towns, in the shape of flour, cattle, et cetera. It is certain that this incessant removal of the phosphates must tend to exhaust the land and diminish its capability of producing grain. The fields of Great Britain are in a state of progressive exhaustion from this cause, as is proved by the rapid extension of the cultivation of turnips and mangelwurzel—plants which contain the least amount of the phosphates, and therefore require the smallest quantity for their development. The roots contain 80 to 92 per cent. of water. Their great bulk makes the amount of produce fallacious, as respects their adaptation to the food of animals, inasmuch as their contents of the ingredients of the blood—that is, substances which can be transformed into flesh—stands in a direct ratio to their amount of phosphates, without which neither blood nor flesh can be formed.

Our fields will become more and more deficient in these essential ingredients of food, in all localities where custom and habits do not admit the collection of the fluid and solid excrements of man, and their application to the purposes of agriculture. In a former letter I showed you how great a waste of phosphates is unavoidable in England, and referred to the well known fact, that the importation of bones restored in a most admirable manner the fertility of the fields exhausted from this cause. In the year 1827, the importation of bones for manure amounted to forty thousand tons, and Huskisson estimated their value to be from one hundred thousand to two hundred thousand pounds sterling. The importation is still greater at present, but it is far from being sufficient to supply the waste.

Another proof of the efficacy of the phosphates in restoring fertility to exhausted land is afforded by the use of the guano—a manure which, although of recent introduction into England, has found such general and extensive application.

We believe that the importation of one hundred weight of guano is equivalent to the importation of eight hundred weight of wheat,—the hundred weight of guano assumes, in a time which can be accurately estimated, the form of a quantity of food corresponding to eight hundred weight of wheat. The same estimate is applicable in the valuation of bones.

If it were possible to restore to the soil of England and Scotland the phosphates which during the last fifty years have been carried to the sea by the Thames and the Clyde, it would be equivalent to manuring with millions of hundred weights of bones, and the produce of the land would increase one-third, or, perhaps, double itself, in five of ten years.

We cannot doubt that the same result would follow, if the price of the guano admitted the application of a quantity to the surface of the fields, containing as much of the phosphates as have been withdrawn from them in the same period.

If a rich and cheap source of phosphate of lime and the alkaline phosphates were open to England, there can be no question that the importation of foreign corn might be altogether dispensed with after a short time. For these materials England is at present dependent upon foreign countries, and the high price of guano and of bones prevents their general application, and in sufficient quantity. Every year the trade in these substances must decrease, or their price will rise as the demand for them increases.

According to these premises, it cannot be disputed that the annual expense of Great Britain for the importation of bones and guano is equivalent to a duty on corn—with the difference only, that the amount is paid to foreigners in money.

To restore the distributed equilibrium of constitution of the soil—to fertilize her fields—England requires an enormous supply of animal excrements; and it must, therefore, excite considerable interest to learn that she possesses, beneath her soil, beds of fossil guano, strata of animal excrements, in a state which will probably allow their being employed as a manure at a very small expense.

The coprolithes, discovered by Dr. Buckland (a discovery of the highest interest to Geology,) are these excrements: and it seems extremely probable that in these strata England possesses the means of supplying the place of recent bones, and therefore, the principal conditions of improving agriculture—of restoring and exalting the fertility of her fields.

In the autumn of 1842, Dr. Buckland pointed out to me a bed of coprolithes in the neighborhood of Clifton, from half to one foot thick, enclosed in a limestone formation, extending as a brown stripe in the rocks, for miles along the banks of the Severn. The limestone marl, of Lyme Regis, consists, for the most part, of one-fourth part fossil excrements and bones. The same are abundant in the lias of Bath, Eastern and Broadway Hill, near Eversham. Dr. Buckland mentions beds, several miles in extent, the substance of which, consists, in many places, of a fourth part of coprolithes.

Pieces of the limestone rock of Clifton, near Bristol, which is rich in coprolithes and organic remains, fragments of bones, teeth, &c., were subjected to analysis, and were found to contain above eighteen per cent. of phosphate of lime. If this lime stone is burned, and brought in that state to the fields, it must be a perfect substitute for bones, the efficacy of which, as a manure, does not depend, as has been generally but erroneously supposed, upon the nitrogenized matter which they contain, but on their phosphate of lime.

The osseous breccia found in many parts of England deserves especial attention, as it is highly probable that in a short time it will become an important article in commerce.

What a curious and interesting subject for contemplation! In the remains of an extinct animal world, England is to find the means of increasing her wealth in agricultural produce, as she has already found the great support of her manufacturing industry in fossil fuel—the preserved matter of

primeval forests—the remains of a vegetable world. May this expectation be realized! and may her excellent population be thus redeemed from poverty and misery.

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*For the New England Farmer.*

## READING, A PREVENTIVE OF DOTAGE.

MESSRS. EDITOR AND PROPRIETOR:—The annual consultation is over, and our folks conclude that we must allow ourselves the luxury of reading the *Farmer* another year. I have sometimes thought it would be interesting to trace back to the pockets of your "patrons" the dollars which, at this season of subscribing, are flocking into the treasury of the *Farmer*, and by some sort of clairvoyant faculty to review the various processes of reasoning by which close-calculating farmers satisfy themselves thus to part with their money. But as I am neither a clairvoyant nor a "medium,"—as neither the spirits of the dead nor of the living will respond from their misty deeps to any invocation of mine, I must be content with the far less poetical task of divulging one of the considerations which in my case, did much to "kick the beam" against the subscription price of the *Farmer*.

It is a common remark that the scenery of the "Hill of Life," over which all of us are wending our devious ways, is ever changing. To those who have just commenced its ascent, every step towards its glowing summit discloses a wider and more glorious prospect; while to those who are on the downward slope, the prospect gradually narrows and mingles with the shades of approaching night. I find myself in the latter class. I am growing old. And it is natural, therefore, that I should be influenced by considerations different from those which move the young, and that we should even perform the same act from different motives. Various and cogent are the reasons that are especially urged upon the young for agricultural reading and study. Are there not those as peculiarly applicable to the aged?

I think it was Mrs. Child who said of female education, one great object should be to teach them to grow old gracefully. Would not a similar truth in respect to the education of the other sex be expressed by saying, they should be taught to grow old usefully? Those who are students all their lives generally enjoy a "green old age" intellectually, while those who neglect the cultivation of their minds, or who suspend it in middle life, often end their days in a state of dotage that exhibits humanity in its most deplorable aspect. Benjamin Franklin, John Quincy Adams, and many others whose names will recur to every reader, were hard students all their lives, and their intellectual faculties were undimmed by age, although they lived far beyond the usual limit of human life. Like the sinews of the body, the energies of the mind are strengthened and enlarged by exercise, and are dwarfed and shrivelled by disuse. Farmers cultivate the one, and neglect the other. They work too much, and study too little. Removed from those excitements of thought and discussion which are afforded by the denser population of the village or city, farmers have probably ever been more subject to mental decline in old age than any other class. An erroneous idea respecting education has probably done much to aggravate the evil. While farmers are careful to secure for their children a good "schooling," they too often require the books to be closed when the school closes, and allow them to be opened again only when the school opens, with the belief that an education once acquired is something that cannot be lost; something of which no reverses, no inattention, no lapse of time, can deprive themselves or their children.

I believe that cases of extreme imbecility or second-childhood are less frequent now, in this country, than they were a hundred years ago. And this opinion is based mainly upon what old people, with whom I was familiar in my boyhood, told me of those who were aged, when these old friends of mine were young—a period of just about one hundred years ago. Among many similar instances, my grandfather used to relate the case of an old man who had forgotten his own children, and who on the return of one who had been long absent, resolutely denied that he ever had such a son!

At the present time, when newspapers are issued daily, and even several times a day; when magazines and books are made by steam; and the news of the day carried all over the country by flashes of lightning, it is no easy thing to get ourselves back among the realities of even one hundred years ago. At that time no paper was published in New England out of Boston. Mr. Thomas says that, "in 1754, four newspapers only were printed in New England; these were all published in Boston, and, usually, on a small sheet; they were published weekly, and the average number of copies did not exceed six hundred from each press." This weekly circulation of about twenty-four hundred papers, in all New England, was mostly confined to literary and professional men—in the words of one of their editors, to "Gentlemen, Merchants, and Others, his usual Customers." Farmers, then, did not read papers, for there were none for them to read; and books, excepting the Bible, Psalter and Almanac, were no more common. About this time, however, newspapers began to multiply, books were printed, pamphlets were circulated, and the discussion of colonial rights which preceded the Revolution, gave to the people an interest in political events and principles, which that long struggle, and the subsequent establishment and operation of an independent government, have not only kept alive but greatly deepened.

With this view of the subject, after all that may be said against political papers and political excitements; after all the shame-facedness we may have to put on for the extravagances into which we and our friends are sometimes led; after all the animosities that a "campaign" engenders are duly lamented,—we may still believe that they produce at least one very important beneficial result. They exercise, invigorate and strengthen the powers of the mind; a good that may safely be weighed against many evils that alarm some of our quiet-loving citizens.

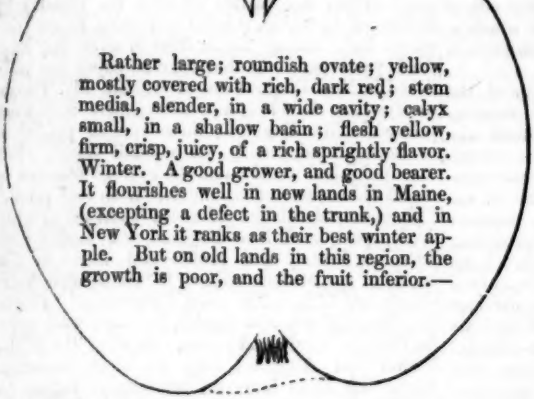
Now, if such has been the effect of papers whose conductors have too often looked to office-holders, or office-seekers for support, or who have sometimes regarded and used their journals as stepping stones for their own political elevation, may we not reasonably indulge much larger hopes and more sanguine anticipations of the benefits which are to accrue from the rapidly increasing demand and supply of agricultural papers? If political questions have done thus much to keep the mind from the

torpor of old age, may we not believe that the persevering study of agriculture, involving as it does the most noble and elevating subjects of investigation and thought which the broad fields of science afford, and being withal so congenial to the tastes and habits of the aged, will do still more to promote the vigor of their minds, and to counteract their natural inclination to repose and inaction?

With such belief I renew my subscription to the *Farmer*, and hope that it may continue to direct the young, to encourage the middle-aged, and to send the invigorating blood of new thought through the minds of the aged. S. F.

*Winchester, Dec. 25, 1855.*

## ESOPUS SPITZENBERG APPLE.



Rather large; roundish ovate; yellow, mostly covered with rich, dark red; stem medial, slender, in a wide cavity; calyx small, in a shallow basin; flesh yellow, firm, crisp, juicy, of a rich sprightly flavor. Winter. A good grower, and good bearer. It flourishes well in new lands in Maine, (excepting a defect in the trunk,) and in New York it ranks as their best winter apple. But on old lands in this region, the growth is poor, and the fruit inferior.—

When well grown, it is rather superior to the Baldwin in quality, but inferior in growth, fairness, and bearing. Origin, Esopus, N. Y.—*Cole's Fruit Book.*

## FISH GUANO.

We have received a sample of *Fish Guano*, manufactured by the Narragansett Manufacturing Company. If *taste* and *smell* afford any evidence of its virtues as a fertilizer, we think this article must have a powerful influence on any crop. The Indians used a dead herring for each hill of corn, and obtained fine crops; so people now living near the sea-shore, and having access to fish, increase the fertility of their soil thereby wonderfully. If this article is made up, mainly, of fish, it will prove valuable, as the bones, in the minute state in which we find them, are exceedingly useful, especially on our old soils. S. B. HALLIDAY, Providence, R. I., is the Agent of the company.

☞ Rollin H. Sanford's fine house in Brooklyn, furniture, pictures, &c., were nearly destroyed by fire on Saturday morning.

## BREAKING COLTS TO BIT AND HARNESS.

Much may done with young horses in the way of cultivating their good manners, and forwarding their education—or breaking, as it is termed—before the aid of the colt-breaker is required. Foals should be accustomed to familiarities, fondling, and kind usage, from their birth; and if that kind treatment be continued as they grow up, they will occasion very little trouble when the time arrives for them to be broken. Before that operation is commenced, it is desirable that a bit should be placed in the young animal's mouth. Any plain snaffle of sufficient substance will answer the purpose. There should not be any reins attached to it; it should be merely suspended by the head piece. The colt will thus learn to play with the bit, which will tend very materially to the establishment of a good mouth, care being observed that the bit is suspended evenly by the proper length of the head-piece. This may be adjusted by any quiet, good-tempered person, to whose care the young creature is entrusted, and may be left on from one to two hours daily. A loose box, hovel, or small yard, are the most suitable places for the purpose.

It is a very bad custom, though a very prevalent one, when a young horse is first bitted, to make use of reins, which are drawn tight. A colt-breaker when employed, should therefore be cautioned against it, for it will cause the pupil to contract a habit of leaning on the bit, and probably create a one-sided mouth. By such treatment, many colts will take a position in one corner of the box or hovel, and there stand and sulk; whereas if the bit be used as I have recommended, they will champ and play with it freely, thereby producing the sensibility of mouth which is essential to future perfection.

Breaking to harness may be considered necessary with such horses as are adopted for carriages; and their services after they are three years old may be advantageously called in requisition on the farm. Their first introduction should never be to a noisy, heavy cart. The plan which I have adopted, with invariable success, has been to put the harness on so that the animal may become quite familiar to it in the stable, after which I have a cord attached to each trace. The horse is then led out by an assistant, and another man, with the cords in his hands, offers a slight resistance, as the animal moves forward; by this initiation the alarm frequently occasioned by the pressure of the collar against the shoulders is avoided, as the man who holds the cords can instantly relax them if necessary. After two or three lessons of this kind, neither trouble nor danger need be apprehended in putting the animal to any employment calculated for the advancement of his education in the art of drawing.—*London Farmers' Magazine.*

☞ The annual value of poultry in the United States is estimated at twenty millions of dollars. The city of New York expends yearly a million and a half of dollars in the purchase of eggs alone.

*For the New England Farmer.*

## WHAT A FARMER'S EDUCATION SHOULD BE.

Mr. Editor:—What kind of education do farmers require, different from other classes, may be asked by those engaged in other employments. Now it may be a difficult matter to determine just what kind of education farmers should possess, in order to qualify them for their vocation and position in life. Still, some ideas on this subject may not be out of place; if farmers can be induced to think on the subject, it will have at least a good look towards improvement on this point. Any education that a farmer can pick up, of course, will be better than none, or, at least, a very scanty one,—a fact which many farmers, as well as other men, are too apt to content themselves with. In fact, a farmer should consider that his education is never finished until he lays his body down in the grave, and this fact will hold good when applied to all classes of people. Now we have a great deal in the world at present, among all classes, which passes for education, but in reality it is just no education at all. That is to say, it is not that kind of education which serves to lead a man to become an honorable, upright and useful citizen. A man may have a great deal of what the world calls knowledge, yet in reality be not educated, after all, in a strict sense.

Education proper, means, as I understand it, the fitting, training and preparing one's self for all the duties which men have to do with in this life. Now a farmer's education should be of that character which partakes largely of the practical in all things that he has to do with. He should see the necessity of fitting himself for his own position in life, and he should adapt his means to that end; he should feel, also, that he has a peculiar work to perform; he should feel, in reality, that no one else can do that work but himself, which is true in every sense of the word. But then a farmer's education, in the main, should be directed with a particular reference to his business on the farm; because, it is from that source that he derives his living, and it is there that his forte lies, and if he does not succeed in making a point there, he will hardly do so in anything else. Now, while I cannot lay down any rule to guide or govern all in this matter, yet I may be able to throw out some ideas, which, if improved upon, will result in benefit to all concerned. I have become satisfied, too, from personal observation, that a farmer's education, if it is ever obtained at all, must be got upon the farm.

Of course, there will be exceptions to this rule, but a home education is what the mass of farmers must depend on, or a system of self-instruction. And in reality, this is the place for it, so far at least as all practical instruction relates to it, whether it be on the farm, or self-improvement as relates to a general education. In fact, I believe that the farm is a better place to get a practical education, such an education as will both be useful and profitable, than any other position in which a man can be placed. I might go on to say how a farmer should fit himself to fulfil all the duties which devolve upon him as a citizen, how he should educate himself so as to meet all the exigencies which men have to encounter. But it may not be practicable, or even necessary, now to do this, as when men are wanted to fill any particular position in life, they can generally be found, though it may be difficult always to find just the right men. Still, if the right men have fitted themselves for any position in life, which circumstances and time may bring about, then, of course, the right men can be found, so that nothing will be lost by farmers in obtaining all useful information on all other subjects which may present themselves for investigation.

Now, it is well known that the farmer, the mechanic, the manufacturer, the professional man, the scientific man and the scholar, each of these, have their particular ideas in which they view matter and things. Namely, the practical men and the theoretical; some, perhaps the majority, will incline largely to the practical view of things, while others will incline more to the theoretical side; now, which is right and which wrong? The farmer says the great and leading points of a farmer's life are the practical, and it is true. But then I claim that this is just as true in regard to the professional man, scientific man and scholar. Why not? Still, while I lay the principal claim to the practical in all things, at the same time the theoretical is worthy of attention and study. In fact, theory many times precedes practice, not by speculation so much, as in opening the way for practice, which comes along either to refute or sustain, as the case may prove to be. Now, to my mind, where theory and practice can be made to harmonize and work together, each in its own way, without clashing with each other, that system of education will be the most perfect and useful in all things.

In these days the question is often put, what kind of studies should the young farmer pursue, or the scholar in school study, in order to make the young man an educated one in after life? To this question, almost as many answers might be given as you have men to deal with; some would say, perhaps the majority, that in order to make the farmer a thorough scholar, he must go through a regular course of scientific studies, dead languages and all, in order to come out right in the end. Others will say they wish their sons to have a thorough, practical and scientific education, such a one as will have a direct bearing on their practical business, and in all other relations in life; still, the dead languages they want no time spent with, as in reality they consider them of no consequence whatever. Now what I contend for, is an education; I do not care so much how they get it, as that they shall have it at some rate. Still, if parents feel disposed to put their sons through college, dead languages and all, then do so; they can make good farmers after they get through; that is to say, if you can get them there, a question which will remain to be tried.

Now, while I freely admit that this course can make thorough going scholars and scientific farmers, yet I claim on the other hand, that as thoroughly scientific farmers and as good scholars can be made without any aid from the dead languages, or heathen mythology, as with it. And why not, we ask? What great difference does it make, just what path you take to gain a certain point, provided both paths come to the same thing finally? The question is not put as to how much Greek and Latin you are able to read and master, or whether you can read any at all; but the greater question is, have you got a good practical and scientific education, such a one as will lead you to become a good farmer, and an honorable, useful and upright citizen. If so, then all right; you can pass along. Now it

may be that where men are preparing themselves for any particular field of action, that it will be necessary for them to follow such pursuits and studies as will fit them for such calling. But, however many recommendations may be laid down for farmers, and especially young ones, to get an education, yet it is known that but very few out of the mass can avail themselves of any such plan as I might and should be glad to lay down for their benefit. So, for that reason, I want to give out some ideas that will be applicable to them at home by their own firesides, and on their own farms. If I were to offer some far-fetched and dear-bought and out-of-the-way scheme, such a plan as not one in ten or twenty could practice, if they were ever so disposed to, then the object I have in view could not be attained.

Hence a plan that will suit all classes to follow after, is the one in general to be adopted. Of course, it is plain to begin with, that the masses of young men preparing themselves to cultivate the soil cannot obtain what is called a classical or scientific education for reasons that every body knows well. Then if this be the case, what is the use or propriety of recommending such an education for the great body of cultivators when they cannot adopt it or anything near it. How much more humane it will appear, when a feasible plan is offered, which every one can adopt, for then you reach that class that stand most in need of instruction.

Those who are capable of instructing and teaching in this business, should always remember that the pupils are the masses, as a general thing, who need instruction and will not come to the teacher for it, because there is a natural diffidence in them that keeps them back. Hence the teacher or instructor must take his teachings and carry them to the people; or in other words, he must give out his instructions in such a plain, practical way, that the people can appreciate and adopt them for practical use. The few who have means, can, of course, get an education any way. It is not those that I speak of: but it is the body of working people who want the best practical method shown to them for instruction, one that will meet them at their own homes and firesides. But then the working farmers should remember that, after all the teachings and instructions they may receive, and other advantages for getting an education, it will depend upon their own efforts at self-instruction whether they make progress or not in the undertaking. That the great body of working farmers will be ever educated, according to the general sense of that word, I do not expect, nor do I consider it of great consequence whether they are or not. What I want to see is the farmers making the best use of means within their reach to obtain a good thorough-going educatiod. If they do this it is all that can be expected reasonably by any one. Farm schools and colleges are being instituted for this purpose, where young farmers can get a good practical and scientific education; of course, all who can should avail themselves of such instruction.

L. DURAND.

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SINGULAR APPLE.—An apple was brought into the Boston market for the first time the present season, from New Hampshire, where it has received the name of "*No-blow!*" It is a most remarkable apple in its appearance, as well as in its character. It is about as near square as round, for it is neither. Its shape is oblong, and it looks like a club foot. It is a passably good apple for eating or cooking. The tree on which it grows stands in a pasture, where it is said to have come up from a dropped seed, and never blossoms—the fruit rarely having any seed! Some of the specimens have little green coated protuberances around the calyx, but they contain no seed. The apple is not entirely coreless, having the usual appearance of an apple core in the flesh, but wholly without seeds. The following is a description of the fruit as accurately as we can give it:

Size above medium but not large, measuring ten and a half inches in circumference over the stem and calyx ends, and eight and a half around the middle of the apple; color greenish, speckled with russet, with a large deep red blush, spotted like a Baldwin, on one side. Stem an inch long, serrated, and set in a deep cavity. One side of the apple resembles a Baldwin, and most of the other side a greenish russet. The flesh is yellowish, and flavored like the Baldwin and Rhode Island greening, becoming tender and pleasant to the taste. The calyx is almost without a basin, being the mere gathering in of the skin, having little green protuberances around it, looking like seed vessels. The shape of the fruit is very irregular, though constantly adhering to its form. It bulges out around the top, and is smaller below the middle.—*Bunker Hill Aurora.*

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## THE DYKES OF HOLLAND.

The dykes, at first sight, strike the beholder as no extraordinary work; and it is not until we find that a considerable part of the country of Holland lies some twenty-four feet beneath the level of the sea at high-tide, and that it has merely a fence of mud-banks to fortify the land against the terrors of invasion from the host of waters about it, that the mind becomes awakened to the vastness and importance of the structures. Nor is it in summer-time, when the surrounding rivers are half dried up, and the ocean without is placid and beautiful as some vast lake, that we are able to arrive at a sense of the protection afforded by the belt of sea-walls to the people within them; but only during the tempests of winter, when the terrible waves are towering to the sky, like liquid mountains, and the tide has risen many feet above its usual height, owing to the immense body of water from the Atlantic having been driven by the gales across the German ocean towards the narrow straits of Dover, and there being dammed up as it were, so that the vast flood is forced back upon the Dutch coast, and leans all its stupendous weight against the ridge of dykes around the Nether-country. It is at such times, indeed, that we learn how much property and how many lives depend upon the strength of these same ocean bulwarks. It is fearfully interesting then to walk at the foot of one of the great dykes, and to hear the heavy waves beating like so many batter-rams against the outer side of the mud wall, and to know by the noise that the ocean is already some twenty feet above the head. The dykes are sometimes forty feet high, and their foundation, which is generally of clay, is from 120 to 150 feet in width. The dyke itself is composed of clay—if not entirely, at least on the outside; and the interior is filled with a mixture of earth, clay, and sand. The face of the dyke is thatched, as it

were, with willow twigs, interlaced into a kind of wicker-work, the interstices of which are filled with puddled clay. The wicker-work lasts but a few years; so that as it requires to be repeatedly renewed, a number of willows have to be grown in Holland for the purpose. The base of the dyke is generally protected by masonry, and strengthened by large heaps of stones and rows of piles; while the summit is mostly planted with trees, because their roots are found to bind the soil firmly together.—*Mayhew's Rhine.*

## CARROTS FOR SWINE.

According to ARTHUR YOUNG, carrots and parsnips are better food for swine, while fattening, than potatoes, and some persons do not hesitate to assert that parsnips are superior to either for feeding them. A writer in one of the English agricultural journals asserts that they fatten all their pork in the island of Jersey on this root. They contain a large amount of saccharine matter, and in this important particular are superior to carrots; and it is well known that no vegetable fattens swine more rapidly than sugar cane. Perhaps in this respect the French sugar beet is superior to the parsnip, as it exceeds it in the amount of the sugar-making principle; but whether, on the whole, it would be as salutary, when used as a constant diet, is a matter admitting, we think, of some doubt. The quantity of these roots, which, under favorable circumstances, may be grown on an acre, is much greater than has generally been supposed. Of carrots, we believe as many as sixteen hundred bushels per acre have been realized in this State, but such a yield is only to be expected, of course, where the ground is in a very high degree of cultivation, and where great care and attention are bestowed on the crop. But supposing one-half of this large amount can be produced, and allowing the roots to possess a value equal to potatoes for feeding swine and other domestic animals, we shall perceive that the balance will be considerably in favor of the former. The labor of tending an acre of carrots or parsnips, is, it is true, considerably greater than that involved in the cultivation of the same extent cultivated in potatoes; yet this is not *all* loss.

All tap-rooted crops, like the parsnip, carrot, and beet, effect a certain amelioration in the lands upon which they grow, by pulverizing and disintegrating its particles, and rendering it more light and pervious. The process of preparing the soil for the reception of the seed, and the method generally pursued in cultivating and removing the crop, contribute also very materially to this result. In some parts of Europe this amelioration is regarded of so much importance, that the cultivation of root crops, once in a certain number of years, is entered as a condition in all leases, and its fulfilment rigidly exacted and enforced. That it is not too highly estimated, is demonstrated by its highly beneficial effects, which are too obvious to be misunderstood.

*For the New England Farmer.*

## THE OPEN POLAR SEA.

### IS THE EARTH HOLLOW?

It appears that late discoveries in the Arctic regions have resulted in establishing the fact that it is much warmer towards the North Pole than about the latitude where Sir John Franklin and his crew perished, or where former navigators had reached; and that there is an *open Polar Sea*, some 3000 miles across. Various speculations are afloat to account for it. The *United States Gazette* says:

"One writer attributes it to the subterranean passage of tropical waters from equatorial seas to the polar regions. Another finds the cause in some supposed great agitation of the winds about the poles of the earth, consequent upon the motions of the latter. A third calls attention to the well-known fact that the earth is an oblate spheriod, and that the flattening of the poles brings the latter nearer to the internal fires believed to exist at the centre of the globe than any portion of the surface. A fourth revives Symmes's famous theory that the earth is hollow and open at the poles, and adds that this opening, must have been caused by the rupture of the earth's crust by the internal fires, the heat of which, emitted from the opening, keeps the Polar Sea free of ice, and milder in temperature. The same writer undertakes to prove Symmes's theory from the book of Job. If the Polar Sea is not accounted for, it will not be for lack of theorising."

Now I do not know but that the theory that the earth is hollow is as likely to prove correct as any other of the above theories. The theory that the warm water at the North Pole is caused by a "subterranean passage of tropical waters from equatorial seas to the polar regions," does not look very plausible; for what agent in nature is in operation to cause such a flow of equatorial waters? If such a flow of water from the South, sufficient to heat the northern Polar Sea, is constantly moving on, what becomes of it when it gets to this open Polar Sea? Would it not, in that case, flow back to the North on the upper surface of the sea? But there is evidence that it does not, as the fact of the moving of the Gulf Stream from south to north, on the sea's surface, shows the fallacy of that theory.

As to the agitation of wind about the Pole, to keep the sea open, it is not at all probable. I should suppose if any part of the earth endured a dead calm, it would be the region about the pole, as the diurnal motion of the earth near the pole is so small that it cannot be subjected to such fluctuation, nor by heat and cold, caused by the action of the sun on the temperate or torrid zones. The third argument advanced is, that the earth is flattened towards the poles, and therefore nearer the internal heat of the earth. But this idea is wholly *fallacious.* Is not the whole Arctic region nearer the centre of the earth than that of the temperate or equatorial region? Yes, every one will acknowledge that, who believes that the earth is an oblate spheriod—flattened at the poles, and that the surface of the equatorial region is much farther from the earth's centre. It remains, therefore, for the theory that the earth is *hollow,* somewhat like an egg shell—open at both ends—that is, at the poles of the earth. Can there not be as great or greater argument advanced that the earth is hollow, as there can be that it is one solid mass to its centre?

I think so. First; is it not conceded that nothing is made in vain—that nothing superfluous is created when the less would be sufficient? Now if it would not conflict with the eternal law of gravitation to have made this earth hollow, instead of solid, and thereby have saved one-half, two-thirds, or three-quarters of the material of which it is composed, and have one-third or more larger surface for animals and intelligent beings to perform their active life,—would not that be an economy worthy of God the Creator?

If the outer shell of the earth is (say from the fortieth degree of both north and south latitudes,) five hundred miles thick, this would leave the inner space seven thousand miles in diameter. According to the laws of attraction, every particle of the inner part of this shell would keep its place, and not fly off 7000 miles across this hollow to get to the opposite shell of the earth. Can the objectors to this theory maintain that it would? I think not. Capt. Symmes, who lectured some thirty years ago, upon the earth being hollow, and capable of being inhabited, was not the first who broached such an idea. I have in my hand a book published in the year 1813, of 179 pages, which advocates this theory. The author was Mr. Otis Paine, of Foxborough, Mass. It was entitled *"True and Infernal Friendship; or the Wisdom of Eve, and the Character of the Serpent. With the Situation, Joys and Loss of Paradise."* It was composed principally of poetry. In its preface I find the following on page 9th:

"1st. That this earth is a *hollow globe*, containing a *celestial region* in its centre, and the same that is called Paradise, Mount Zion, and Eden, in scripture, where *Adam* and *Eve* and the new creation were laced when created, and whence they were driven on *eating the forbidden fruit.*"

After advancing three other propositions, which do not relate to this question, he proceeds to prove his theory as follows:

"Proof that this earth is a hollow globe, &c. By the records of Scripture, both of the old and new Testaments, it appears that there is a region, or beautiful realm, in the centre or heart of this earth; that the first created man (Adam) was formed of the dust of this earth, and put into this realm (then called Eden) to till and cultivate it, and to have dominion over all who dwelt there. But he, (Adam) breaking his Creator's law, was driven from this celestial region to till the ground from whence he was taken.

"It farther appears, by the predictions recorded in scripture, that this region will be discovered, and be inhabited with the human race; that on this discovery, a thousand years of perfect peace throughout all nations will take place, and millennium commence."

Mr. Paine then occupies over four pages of his book with extracts from various passages of scripture, and his own comments, to prove the truth of his theory.

Now, I will venture to conjecture what this "flaming sword, which turned every way," &c., was. If the Garden of Eden was in the hollow of the earth, and our first parents were "driven out," in consequence of disobedience, it was the *glittering ice* which from that time to this has been sufficient to keep them and their posterity from finding the entrance to the interior of the earth, but will, within a few years be overcome, according to the prediction of Mr. Paine. No doubt but that the indefatigable energy of our people will have a steamboat with a suitable crew, sailing upon this "open sea," within a few years and if there is an opening, one or two hundred miles in diameter, they will be sure to find it, and their indomitable courage will induce them to enter it, and within a year after, may return and make their report.

Yours most respectfully, ISAAC STEARNS.

*Mansfield, Mass., January 1st*, 1856.

P. S.—I would ask the question of you, or your correspondents, (if they see this in your paper) how long ago was it that Capt. Symmes lectured upon the theory of this earth being hollow; and also, were his lectures ever published? If so, where can I obtain a copy? I. S.

## HOW TO MAKE A JIBING HORSE DRAW.

An omnibus full of passengers was detained a long time this afternoon in Oxford Street, by one of the horses turning obstinate and refusing to proceed; and notwithstanding numerous and persuasive arguments inflicted upon him by a large crowd of persons collected, such as digging spurs into him from the hand, sundry kicks and licks, cursing and swearing, &c., the horse would not advance; and when by manual force, some ten or fifteen managed, on several occasions, to move the omnibus a few paces, it resulted in nothing but a graceful *pirouette* of the whole concern back to the same spot, much to the amusement of the crowd, but not so much of the passengers, who, I must admit, maintained the greatest patience and forbearance. Observing all the endeavors of the crowd to fail in making the horse move, I suggested to the persons interested, a simple remedy used in India, on similar occasions—that is to get a slight rope, and attach it to one of the fore feet of the stubborn animal, and the person holding the other end of the rope to advance a few paces, taking with him the horse's foot, when, as a matter of course, the horses and omnibus must follow. My advice was at first ridiculed and laughed at, but after some more ineffectual attempts after their own barbarous and savage manner, a rope was produced and applied as described, when the horse immediately advanced, and the omnibus, in the course of a few minutes, was out of sight, much to the amazement of the rude and bigoted crowd. I heard them expressing their wonder and astonishment at this very simple remedy, which should be more generally known in this country.—*London Times.*

## GOOD HOGS.

Mr. Cyrus Stow, of Concord, Mass., gives us an account of four Suffolk pigs, fatted by him. We saw them a short time before they were killed, and noticed that, though not remarkably large, they had great weight of carcass for the bone and offal. They were bred by C. B. Clark. Mr. Stow says—

"These four pigs (all sows) I bought on the 8th of February last. They weighed 145, 140, 130, 100—total 523 lbs.—at 5½ cents—$27,46. Deduct for shrinkage forty per cent., would leave 314 lbs. dead weight when I purchased them. They were killed on the 15th of December, and weighed 449, 374, 366, 367—total 1555 lbs. I sold three of them at my door at 11½ cents per pound—

kept the other for my own use. Aggregate value of the four, $178,04; deduct cost, $27,48, leaves a gain of $151 48. They were kept by me 309 days, and gained, as I calculate, 1247 lbs., or a trifle over a pound, each, per day—nothing to brag of if they had been high fed—but they were kept very cheaply, and had but little meal until the last month of the time, when they were fed with cob meal (corn and cobs ground together.) The remainder of the time they had the wash of the house and the skimmed milk of two or three cows, with small potatoes, and pumpkins boiled up with a little meal. I keep five cows and sell about one-half of the milk."—*Boston Cultivator.*

## WEALTH OF THE ROTHSCHILDS.

The number and amount of the loans that have been negotiated by the Rothschilds is scarcely any index of their wealth. It is not necessary that they should be worth the enormous sum of a thousand million of dollars, which has been absurdly attributed to them, in order to take, since the Crimean war, the English loan of eighty millions of dollars, the Austrian of a hundred and twenty millions, the Turkish of forty millions, an early one to Russia of one hundred and thirty millions, one to Sardinia of ten millions, another to England in exchequer bills of thirty-five millions, and a second now on the tapis of a hundred millions of dollars.

Just consider how such loans in this country and everywhere else are made. Some house, like the Rothschilds, for example, confers with its correspondents and friends of various cities, ascertains how much they will assume of a projected loan, and then rejects or accepts the proposal of the borrower on specified terms. The house named represents the whole, and perhaps is the only one recognized and known in the transaction; but takes no more of the loan, perhaps, than others not named, if so much, and may immediately, or soon, part with that moderate fraction, if a satisfactory advance can be obtained.

Negotiators of public loans in this country are not always men of large capital, but, acting in the capacity of conductors, they are merely in possession of ability to place them among those who are. They, as well as the Rothschilds, doubtless sometimes act in the capacity of brokers simply, though at others, without question, as loaners of their own capital. A merchant might as well be set down as worth five millions, because his sales amount in two years to that sum, as the Rothschilds be estimated as worth a thousand millions of dollars, because the loans they have negotiated within a few years reach that prodigious figure,—a sum comprising about one-quarter of all the precious metal of the globe.—*Newark Advertiser.*

YEAR BOOK OF AGRICULTURE.—This work is a compilation of articles and engravings, on nearly all subjects connected with agriculture, and contains a thousand suggestions valuable to the farmer who has not access to a variety of works on similar topics. It is printed handsomely, is illustrated by numerous engravings of implements and plants, among the latter, some half-dozen full large engravings of the cotton plant in its various stages. DAVID A. WELLS, Esq., a gentleman well-known as a writer, chemist, &c., and now the principal Editor of the *Farm Journal*, published at Philadelphia, is the Editor. For sale by Ruggles, Nourse, Mason & Co., Boston.

## THE FIRESIDE.

When the snow-flakes softly rattle
On the darkened window pane,
And the night winds moan and murmur
In a wild and fitful strain—
O, how welcome is the cheerful,
Brightly burning, ruddy light,
Glowing from the evening fireside,
Glowing, sparkling, warm and bright!

How the mellow beams are dancing
On the ceiling, in the hall,
E'en within the heat's dark corners,
With a gentle glance they fall.
And in the clear and pleasant radiance,
As in the waves of gold it plays,
Melts the soul that's filled with sadness,
Lights the eye with radiant rays.

Loved ones meet around the fireside,
Through the dreary winter eve,
Whilst the storm without is wildest,
Tales of other days to weave,
Songs that to the heart are dearest,
Breathe upon the hallowed air,
Voices gay in mirth are mingled,
"Household words" are sweetest there.

How the aged and the weary
Look back to the happy hearth,
By whose merry light they sported,
Ere they tasted aught but mirth.
Though the glow has long been faded,
Brighter than of yore it burns,
When the spirit, worn with wandering,
To that cherished vision turns.

Then, while falling snow-flakes rattle
On the darkened window pane,
Let us gather round the fireside,
Heedless of the night wind's reign.
And when life's cold winter cometh,
'Mid the darkness and the storm
We'll again in memory's chamber
Meet around the fireside warm.

*For the New England Farmer.*

## FANCY STOCK.

WHO KNOWS WHERE IT CAN BE FOUND.

MR. EDITOR:—I am one of the "constant readers" of the *New England Farmer*, and from it have gained a deal of useful information in relation to the various matters on which it properly treats, (i. e. ruralities,) besides a great variety of pleasant and instructive reading on various other subjects. But there is one thing that I have been rather surprised at,—and that is, that people do not avail themselves more of the opportunity of advertising in its columns many things which are wanted by those who reside in the country, and particularly in suburban villages;—I refer to the various kinds of *fancy stock*, such as fowls, pigeons, ducks, geese, rabbits, and dogs of various kinds.

Now there are very many who have a taste for such things, and would gladly become purchasers, if they only knew where the sellers were to be found. In England, it is quite the fashion to advertise every such thing in the rural papers, so that if a per-

son desires to obtain any particular breed of fowls, or a well-bred sporting or watch dog, he can almost always find just what he wants at the shortest notice. I think that those who breed such animals, either for amusement or profit, would find it greatly to their advantage to heed this suggestion,—and advertise in the *New England Farmer*.

Yours ever, A COUNTRY GENT.

## WHAT'S THE USE OF AGRICULTURAL PAPERS?

MR. EDITOR:—If one of the great objects of agricultural papers should be to induce the mind to co-operate with the hands in the prosecution of their laborious task, then it is a question of first importance to those who conduct them, by what means can this object be attained?

The first thought that occurs to my mind, is, that agricultural papers must show that farming is a subject worthy of the mind.

That it is not generally so considered, I am well aware. In reading the life of Daniel Webster, we find that his father was not satisfied with his business, but murmured that it was his doom to plod upon the farm, "unhonored and unknown," while others, whom he regarded as only his equals by nature, but who had chosen the "professions," had secured both fortune and fame. And such is the common feeling of farmers throughout New England, at least. The farmer's son that would be rich or respectable, looks away from the farm for the means of attaining his object; and he has a perfect right to do so, if wealth and respectability are not the growth of the soil. If all who become lawyers, ministers, doctors, merchants, and mechanics, live easier, make money faster, and otherwise get on better than those who remain upon farms, it appears to me an utterly hopeless task to satisfy the mind that possesses a single spark of enterprise or ambition with the business of agriculture.

Here, then, we are; agricultural papers must go to work, and prove that, all things considered, farming is as desirable a pursuit as any other. If they cannot do this now, they must wait until the present rush of young men from agriculture into every other department of business, shall enable them to do so. For until this is done, by facts that will convince and by figures that do not lie, people will not be satisfied with the business. No amount of poetical flights nor of rhetorical flourishes—no talk of Cincinnatus at his plow nor of the flocks of Job—no descriptions of what agriculture has been or ought to be—will answer; they must show what it *is*, and, by way of contrast, what other occupations are. They must turn attention from the Websters, the Lawrences, and the Chickerings, to the great multitude of lawyers, traders, and mechanics, above whom these individuals towered so high. We have books for the million; but we greatly need books *of* the million. The Life of Amos Lawrence has been written, and printed, and read. But the lives of the thousands whom that book shall entice to the city, will never be written at all, (the number that sleep in the watch-houses, it is true, may be mentioned in the daily papers, but who will look there for the followers of a great man,) unless agricultural papers shall follow up the history of her truant sons, and give us a new phase of biography—lives of the undistinguished.

But to be more direct. I believe there is among farmers great misapprehension as to the condition of the mass of those who follow other professions, especially of those congregated in our cities. I think also that agricultural papers can furnish no matter more interesting and valuable to farmers, than honest statements of the actual incomes and necessary expenditures—the toubles and anxieties—the disappointments and vexations, which are incident to professional, commercial, and mechanical life. If this were to be done faithfully, many causes of contentment and satisfaction with the farm would be found, where in fact only reasons for envy and discontent are now seen. The Billy Grays, the John Jacob Astors, and the Stephen Gerards, are taken as a sort of basis for our notions of the wealth of city merchants; the ten to twenty dollars a week that the overseers and foremen of shops sometimes receive, gives us our impression of mechanical wages; to the few distinguished men who force themselves upon our notice, in the various walks of literature and learning, are we indebted for our ideas of the honors which attach to the professions; and the "glory of war" comes from her Alexanders, and not from the thousands who butcher each other on the field of battle, or die still more miserably on the march or in the camp.

When men come to form their opinions of these professions from the great multitude who follow them as the means of a livelihood, and not from the few "great and shining lights" that, meteor-like, occasionally rise up far above the ordinary level of their associates, I believe that the humble claims of agriculture will be better appreciated.

Let agricultural papers, then, send their "reporters" not only to agricultural exhibitions, but among the office-holders at Washington, among the learned professions, among the "merchant princes" and their clerks, into the shop and factories of the mechanic and artisan, and if you please let them step into Sebastopol, where the three mightiest nations of the earth have been making corpses as men make hay; let them pry into the "private affairs" of these classes, learn what rents they pay, what bills they have to meet, and just how their money goes, then see how their children "make out" in the world, and finally look into the probate office to ascertain what sums they leave for their heirs and successors, and we shall thus have an account-current which will greatly assist in making up our balance-sheet between them and agriculture—and arguments, too, for the decision of the question with which we started,—Is farming a subject worthy of the mind?—Will it do for farmers, like good generals, to make the subject of the approaching "summer's campaign" the study of their leisure hours in the "winter quarters" to which they are about retiring? Is it proper that, like the lawyer, the farmer should studiously hunt up the authorities and precedents which bear upon the "case" in hand? May he, like the mechanic, have a "pattern" to work by? and like the physician, have his "dispensatory" to consult in administering to his uncomplaining patients?

If these queries must be answered in the negative, we may as well throw aside the agricultural paper at once. Love stories and the Pirate's Own Book can be read by our families, and ghosts and hobgoblins, stamping tables and communicating spirits, ugly neighbors and unruly cattle, may be discussed as well without a paper as with it; and

when these fail, we can at least "whistle for want of thought," and so "welcome in the peaceful evening;" or we may keep ourselves in a constant fret, and make those about us as unhappy as an envious and discontented spirit ever does, with our murmurs that we are nothing but farmers, while others are enjoying the luxury of large pay, high life, and light toil.

But if the foregoing questions can be answered in the affirmative—if we really can believe it will "pay" to think and read about farming—if we begin to mistrust that, after all, we are about as well off as the average of other professions—how agreeably does the dark side of our prospect change for the brighter and more hopeful! Let us keep it before our eyes if we can. A WINDSOR COUNTY BOY.

*Winchester, Mass., Dec.*, 1855.

*Northern Farmer.*

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*For the New England Farmer.*

## TYRANT, FLY-CATCHER, OR KING BIRD.

MUSCICAPA TYRANNUS.

This bird generally selects, for a place to build, an old apple tree standing alone in some pasture skirted with wood, or on some hill-side, below which is a clear field with a few trees or bushes thereon which will serve him for standing places; from these he sallies forth in pursuit of insects that pass and repass, turning to the right, then to the left, now rising in the air with quick vibrations of his wings, then, with hawk-like motions, he skims the surface of the ground, seizing his prey at every turn he makes. Over such a field he holds supreme authority, and is a dreaded foe to blackbirds, crows and hawks; even the eagle daunts not his courage; for he no sooner perceives his coming than he lowers his body to the branch on which he stands, moves his head from one side to the other, raises its feathers—then launches forth to meet him, uttering, as he starts, his twittering notes; the eagle no more sweeps in circles to reconnoitre the field below, but starts on a direct course to rid himself of his pursuer—but it is in vain—the intrepid tormentor rises above him, dives upon his back, rises again, and sweeps from side to side, while with velocity the eagle dives, then mounts almost perpendicularly to elude his hot charges; but such evolutions avail him nothing, he must leave the king-bird's precincts, or by alighting on some tall tree, when, with a few more swoops at this noble bird, the tyrant retires; and as he returns, hovering triumphantly to his place, you see his head move, as his eye follows the insects that he passes, first on one side, then on the other, until he sees one to his liking; he turns, or rises, as the case may be, snaps him in his bill, returns to his place, strikes him a few times on his stand, and devours him; thus is he as merciless with his prey, as is the eagle, with whom he disputes the right to hunt over the same field, and to every bird, larger than himself, a teasing master, who dares intrude on his presumed rights.

After having chosen the spot, which is generally on a horizontal branch, not many feet from the ground, in which to locate their nest, keeping in view the fact that the thickest foliage will best conceal it, the male decends to the ground, and brings to the place the first stick which commences the foundation of their future home. The work is then carried on principally by the female, who with small sticks, coarse grasses, and dry flowers of the yarrow forms the outside; and for the inside, she brings small fibrous roots, but oftener fine dried grass and horse-hair, making a very neat and compact nest. The exterior diameter of it is about five inches, the interior diameter is two and three-fourths inches, and the depth two inches. The eggs are usually four, and sometimes five, in number; of a broad ovate form, and of a very pale cream color, marked with large brown spots placed in clusters with others, some of a deeper, and some of a lighter purple, chiefly at the large end, and smaller detached spots of the same color at the small end; they are one inch in length, six-eighths of an inch in diameter.

During the time of incubation the male presents an example of the most devoted attachment to his mate, rarely, if ever, shown by any of the feathered race. While the female is performing her duty of hatching her eggs, he sits near the nest, on a projecting branch of the same tree, and with valor defends her and the nest from all harm; while at the same time, his restless eye selects for her the choicest food. He also assists in hatching the eggs, and appears to perform the duty with cheerfulness.

In the fore part of the day the female leaves the nest, and alights on the nearest stand in the field, and sits pluming her feathers for some time, interrupted at times by insects which she allows to pass, by merely following them with her eye. After having arranged her feathers, she is ready to take her prey the first opportunity that presents itself. In a few moments she launches in the air and keeps upon the wing, making a wide circuit around the field, and sometimes beyond it, before she alights; this circuit she makes several times, and remains one, and sometimes two hours from the nest; when she returns the male, with incessant twitterings, betakes himself to the most prominent part of the field to pass the remainder of the day in strife with other birds.

After the young are reared they separate, and you hear them no more during their stay at the North; they are seen, however, watching for insects from stone walls, posts, or fences, until about the first of September, when they depart for the South.

With regard to the house-wren, (*Troglodytes Adon*): This favorite and well-known bird arrives in Massachusetts about the tenth of May, and immediately commences looking up a place for its nest; they will select some cavity in an old apple tree, or occupy a box put upon a pole, or tied on a tree in the garden. A jug with a hole through its side large enough for their entrance, with its neck corked tightly, is generally accepted by them in preference to any thing else. When any one takes sufficient care to provide such a place for them to breed in as their habits require, he will be likely to have a pair of these birds about his premises, whose loud and animated song is exceedingly pleasing, and whose usefulness in destroying insects which prey upon fruit and vegetables, would be a recompense.

It cannot be too strongly urged upon farmers and horticulturists to provide for the wants of useful birds; the immense number of insects destroyed by them daily, for their own wants, and those of their young, greatly reduces the ravages of these

vermin. In the month of May I tied to the upright limb of an apple tree, a jug which I had fixed for their accommodation; also a box, which I placed upon the ridge-pole of a shed; in a few days I heard the merry song of a male as he sat upon the top of the box, and for two days he sang almost incessantly; at times he would fly to the jug and curiously examine it, then return to the box—constantly in motion when not in song. On the morning of the third day a female arrived—shy and coy, and as she became more familiar, he became more vivacious; it seemed as though his little bosom would burst with ecstasy of joy, as he led her to and from each place that had been erected for their use.

The next two days seemed to be spent by them in viewing the orchard and premises generally, particularly the pig-stye, barn and bee-house; the latter building being a place of resort for them through the summer at twilight, at which time they destroyed numbers of bee-moths. On the fourth day the female commenced carrying smal dried sticks into the jug, and continued with this work until she had filled it nearly full, placing them on the top in a circular form, leaving a cavity, in which she made the nest of fine dried grass, and lined it lavishly with feathers.

It is invariably their custom to nearly fill the cavity they have selected with sticks before they build their nest, unless such a cavity is very large; and in every instance, I have noticed that the top of the nest was above the place of their entrance.

*Danversport.* A. F.

## PROFUSION OF LIFE IN THE OCEAN.

Not a shell or a stone is brought up, but is thronged with living beings. Every branch of weeds gives shelter to multitudes of creatures—some temporary lodgers, some permanent residents. Life is a parasitic upon life. The *surpula* builds its stony case on the abode of the shell-fish, and the delicate lace-work of the moss-coral overspreads the surpula. Over the stem of the seaweed creeps the graceful plumes of the zoophyte spring. These, again, are thickly invested by the pretty cells of many smaller species; and they in turn, minute as they are, often bear in profusion the curious forms of microscopic animaculæ. Let us take a stone from the heap that is lying in our boat. It is a perfect museum in itself. It is richly colored in parts by the nullipore—one of the lowest forms of vegetable life, which does for the scenery of the ocean, what the moss and the lichen do for the scenery of the upper world. Here is a circular cluster of cells, "looking like beautiful lacework, carved in ivory;" here a little saucer, of the purest whiteness, containing within a number of stony-tubes, the habitation of a whole company of tiny polyples. A sponge overgrows one portion of the stone, itself the home of many a living thing; a sea anemone has possession of another. The little encrimite is present, and near it a small star fish. There are worms, too, in plenty; and more of life and beauty than we have space to describe. It is pleasant to think of the happy existence a single stone may support.

The forms to which we have chiefly referred are visible to the unassisted eye; but, as Humboldt remarks, "the application of the microscope increases in the most striking manner, our impressions of the rich luxuriance of animal life in the ocean, and reveals to the astonished senses the consciousness of the universality of being."

## MIGRATION OF PLANTS.

Botanists have long been convinced that the facts connected with the diffusion of plants may often be explained by an inquiry into the structure of their seeds, the lightness of these, and their capability of teansportation by winds; by their texture preserving them from destruction in the waters of the ocean; by the prevalence of particular currents in the air or sea; or by the presence or absence of mountainous barriers, or other obstacles to their dispersion. It had been observed that (the God of) nature has provided a variety of methods for the diffusion of seeds. Many such have been noticed by naturalists, and their operations has been illustrated by facts well ascertained. The most important are doubtless winds, or rivers, or marine currents. The former convey the lighter kinds of seeds to an incalculable distance, and the latter are well known to transport others occasionally from the most remote countries. Besides these more general causes, it is well known that seeds are often conveyed from foreign countries, which were transported in commerce. Various plants are well known to have been introduce into Europe by the accidental mixture of their seeds with rice brought from the East or West Indies, and those tropical countries have interchanged some of their productions in a similar way. Some seeds are capable of preserving their vitality in the stomach of birds, and are thus propagated. Such are the mistletoe and juniper. A number of facts are upon record, which prove that the migration of plants by means of currents in the ocean to distant shores, where, if the climate is congenial to them, they form new colonies, is not a matter of conjecture, but a thing which actually takes place. Several remarkable instances of this description are recorded in the *Amanœitates Academicae.* It is stated that the seeds of several plants of equinoctial countries are occasionally collected in the Hebrides.—*Pritchard's Physical History of Mankind.*

OUR SUMMER BIRDS.—The attention of the reader is called to a highly interesting article on one of our summer birds, the *Tyrant, Fly-Catcher,* or *King Bird,* well known to all who visit the fields in the summer. It is written by AUGUSTUS FOWLER, Esq., of Danvers, Mass., a brother of S. P. FOWLER, whose articles in our columns on "*The Birds of New England,*" have won for him an enviable reputation. Both of these gentlemen are deeply imbued with a sense of the beautiful in nature, and have a high appreciation of the charms of rural life,—and thus their writings touch a chord in every human heart. We welcome "A. F." to our columns, and feel confident that the reader will welcome him too.

VIRGINIA FARMER.—Harrisonburg, Rockingham Co., Va. By WM. G. STEVENS.—Filled with valuable reading. We are glad to see agricultural papers taking root in the Southern States.

## CULTURE OF THE GRAPE.

In a recent number of the *Farmer*, we had an illustrated article upon the Grape, and then spoke of it as an ornament in the garden or about the dwelling, of its healthfulness as an article of food, and of its usefulness in sickness. That article has been very favorably received, and a desire expressed by many to see another giving more full and explicit directions for *pruning* and *training*, from the time the root or cutting is set until the vine has covered all the space which it is desirable to have it occupy.

In Wilson's Economy of the Kitchen Garden, we find succinct and clear directions for the management of the vine, which we give below, with such illustrations as cannot fail to make the whole matter clear to those entirely inexperienced.

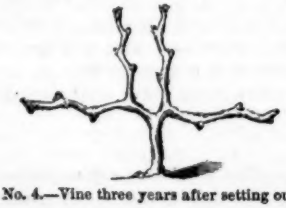
No. 1. No. 2 No. 3.

No. 1.—Plant when set out.
No. 2.—Plant one year after setting out.
No. 3.—Plant two years after setting out.

No. 1 on the plate is a representation of the plant when set out, of one year's growth from the cutting, and is to be cut off to one good bud, as shown by the cross lines. The lower bud is seldom counted, and only the upper bud is to be allowed to produce one shoot; the young buds on this shoot will many of them shoot out in the course of the summer, which should be pinched off.

No. 2 represents the plant of one shoot, one year after being planted, and is to be cut down to two good buds, about fifteen or eighteen inches high from the ground. The shoots from these two buds are to be trained to a trellis, horizontally, to a distance of four feet, and then their ends pinched off, as we intend the plant to fill a space in width of eight feet.

No. 3 represents the plant two years after setting out, with the last year's horizontal shoots as they must be cut in to three good buds. The two buds next to the stem, are to be allowed to shoot and grow upward as high as they please, to be tied up to the trellis, and the end buds to be trained horizontally, to the limits of three or four feet distance, and again pinched off.



No. 4.—Vine three years after setting out.

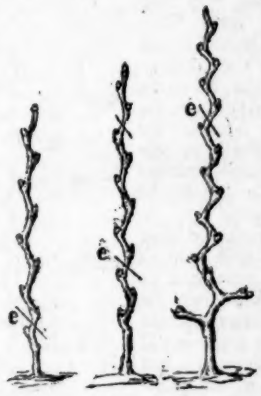
No. 4 represents the plant three years from setting out, with its two last year's upright shoots, as they must be cut down to four good buds, which are this year to bear fruit, and the horizontal cut in to three good buds; their shoots are all to be trained upright, which will complete the head of your vine, with eight branches at about one foot apart.

No. 5.—Vine four years after setting out

No. 5 represents the vine four years after setting out, with the two centre branches that bore fruit last year, as they must be cut down near to their origin. The next two cut down to four buds for bearing fruit. The next two to one good bud, for producing one good wood shoot. The next and last two, to three buds for bearing fruit. Its regular culture, afterwards, is to cut four of the branches low down, and to leave four longer to bear fruit alternately, always allowing the branches that bear fruit the one year, to be cut down, for recovering a good shoot again for bearing the next.

The other mode of training, is called horizontal training, but may be extended to any height or distance, so as you retain the leading shoot, or it may be confined to a very low space by cutting it off.

No. 6 represents the plant when set out, the same age as the other; to be cut also to one good bud, as at *e*. This bud to be allowed to produce one good shoot.




No. 6. No. 7. No. 8.

No. 6.—Vine when set out.
No. 7.—Vine one year after setting out.
No. 8.—Vine two years after setting out.

No. 7 represents the plant one year after setting ont, to be cut down to three good buds as at *e*. The shoot from the upper one of which is to be trained upright, and the two lower ones to be trained horizontally.

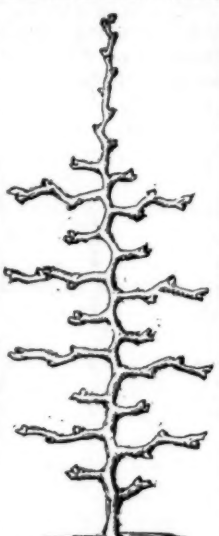
No. 8 represents the plant two years from setting out, the leading shoot of which is to be cut down to nine buds, as at *e*. The upper bud to be allowed to shoot upright, and all the others horizontally; four feet from each side. The two last

year's horizontal, cut as they must be to one good bud, its shoots to be trained as it was last year.

No. 9.—Vine three years after setting out.

No. 9 represents the plant three years after setting out, with its branches cut as they must be. The two lower ones to three good buds for bearing fruit. The next two cut to one good bud for wood. The next two, to three for fruit. The next two, to one. The other two to three, and the leading one again to nine. The upper bud to have its shoots continue upright —the other eight horizontally.

No. 10 represents the plant four years from setting out, with its branches cut as they must be. The lower two, to one good bud; the second two, to three buds; the third two to one; the fourth two to three; the fifth two to one; the sixth two to three; the seventh two to one; the eighth two to three; the ninth two to one, and the leading shoot to nine buds, all to be managed in the same way as last year. And in this way you may continue your plant as far as there is room; when that is terminated, cut off your leading shoot, and regulate all the horizontal branches so that they may bear fruit and wood alternately to the end of the grape vine's existence.



No. 10.—Vine four years after setting out.

It may be necessary to observe, that in the first mode described for training the vine, the two horizontal branches or arms, to support the upright shoots, are intended to extend four feet from each side of the main stem, and on each of them are to be selected four upright branches which will make them about a foot apart. It will be necessary to rub off any intermediate buds, so as to regulate them, to be placed at proportionate distances. And after they are once cut down to one bud, the next year's cutting down would be a joint higher, and this may be allowed for a year or two; but whenever they get too far above the arms, by cutting down to the lowermost new bud, they must be cut down on the old wood near to their origin, and only one good shoot allowed to grow; any other bud to be rubbed off. And the same rule must be observed in cutting all those trained on a horizontal plan. In directing vine buds to be left on the leading shoot, it is only intendedcase in the plant be very strong and vigorous; should it not be so, it would be better to cut it to five, or even to three buds; in which case there would be only one or two branches on each side instead of four, as exhibited in the plate; and the choice of numbers should always be regulated by the strength and condition of the vine.

But the grape may be produced in large quantities, and of fine quality, without the exact pruning detailed above. Plant and tend it as you would any thing else that you wish to make flourish rapidly, and after it has covered as much space as you care to have it, prune it, so as to leave the branches free and clear of each other, and so as to admit freely the sun and air. In this manner the plant will not have so full a supply of roots, as under the system of close pruning, but with proper feeding, will flourish and produce abundantly. There is no necessity, therefore, of any person neglecting to set grape roots, because he does not fully understand the principles of after-culture.

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## ON WINTERING DOMESTIC ANIMALS.

There is no great amount of labor to be done out of doors in this climate, during December. The most important labor of the farmer now, is the care of his domestic animals, to see that they be well sheltered from cold and wet, and properly fed and watered. The year's profit or loss, of the farmer, depends greatly upon the manner in which he winters his stock. The milk of the ensuing season, the wool, and the ability for labor, all depend, in a great measure, upon the care the farmer gives his cattle, sheep and horses, during the winter. The *Cultivator*, some years since, most truly said—

"If there is one truth respecting animals more deserving of remembrance than another, it is that the animal, entering the winter months in high condition, is already half wintered—that is, the care and food required to bring him out well and hearty in the spring will not be one-half as much as will be required by the one that commences the winter spring-poor. A fat strong animal, will be warm and comfortable where a poor weak one can hardly live, and the hearty vigorous one will digest and assimilate food which the weak one would scarcely taste."

Regular hours for attending to all matters is important, but in no department of the farmer's business is it more important than in milking cows, foddering or feeding, watering and carding stock.

Cattle should be fed often, and but little at a time,—say four times in the twenty-four hours, will keep cattle in better condition and at less expense than to feed but twice a day, being careful never to give them so much at a time that they will leave their feed before it is all consumed.

Cattle thrive better when their dormitories are kept clean and freely littered with dry leaves or straw, being mindful not to forget the frequent use of the card and currycomb. Cattle, horses and sheep, should have salt where they can have access to it whenever they desire it. A gentleman informed me that some years since he lost many horses annually, but since he commenced to salt his

horses three times a week, or feeding on salt hay, he has lost none.

Sprinkling hay with salt dissolved in water, or salting hay too freely, is injurious, as over salting diminishes the nutriment, and weakens and keeps the animal too loose; but when they have free access to use or not, they are not apt to take more than nature requires.

Cutting provender, corn stalks, straw or coarse hay, is a great saving. When cut, it is all eaten; there is no loss of material. A good milch cow will tell her milker a good story when well supplied with chopped corn stalks, or rye, or oat straw, wet and well powdered with corn ground with the cob or wheat, shorts, or buckwheat bran, and a little powdered oil cake. My cows increased their milk and flesh, and my sheep improved last winter, by Col. JAQUE'S mixture, which was two bushels of turnips cut fine, one bushel wheat bran, half a bushel powdered oil cake, with seven bushels cut hay, wet with ten gallons water—the mixture well stirred and intermixed, giving them as much as they would eat of it thrice a day, and once a day a feed of good English hay, with a tub of soft clean water to which they had access as often as they chose.—*Country Gentleman.*

## THE HORSE INFLUENZA.

We hardly need recommend the following article, from Dr. DADD, to the close attention of our readers. It is the result of thorough knowledge and long experience, and its suggestions will be found of great value. We especially hope that the closing paragraph will not be forgotten, but that all who can exert any influence, will use it for the encouragement and extension of Veterinary Science.

EDITORS OF NEW ENGLAND FARMER:—*Gentlemen*—Your note requesting me to answer the inquiries of one of your subscribers, who seems anxious to elicit information regarding the treatment of the prevailing *horse influenza*, came to hand. In reply, permit me to remark, that it would be a matter of impossibility for me to give the *proper* treatment of a disease, which, in both attack and progress, assumes such a variety of forms. In some cases the most consummate skill has been baffled. I am informed that in the State of New York, the disease has assumed a most malignant type, and the subjects die in the course of a few hours, notwithstanding the efforts of the most experienced surgeons.

During the past week several fatal cases have occurred in this vicinity; the cold snap of last week operated very unfavorably on horses then suffering under the primary stage of the above malady, and should the weather continue cold, I fear we shall have to record a greater per centum of deaths than heretofore.

I have said that the disease assumes a variety of forms, hence no special treatment can be adopted; variations in the *symptoms* indicate the same as regards *treatment;* and what might be good medicine at one stage, would be injurious at another.

Some general ideas of the treatment, however, may be gleaned from the following:—

The disease is very prostrating, and as it progresses, the heart, lungs and brain become congested and embarrassed. The blood accumulates carbon; the heart fails to propel, and the lungs to vitalize the same. This state demands stimulants of a character that shall excite vital action, and tend to effect chemical changes in the blood; the most valuable agent in this view is carbonate of ammonia. In veterinary practice this agent is considered as one of the most valuable diffusible stimulants; it acts first on the nerves of the stomach, and through them excites the whole nervous system; it may be given in doses of from one to three drachms, either in the form of bolus, or drench. Its stimulating influence, over the heart and nervous system, may be increased by the addition of one or more drachms of good Jamaica ginger. This treatment may be continued until congestion subsides, which may be known by the fulness of pulse, and heat of the external surface of the body, and by other symptoms which usually attend fever in its inflammatory stage.

The exciting, or stimulating plan of treatment must never be entirely abandoned; to husband the powers of the system, and thus guard against subsequent prostration, must be our chief object; although the case may require a sedative to-day, (in the form of camphor and white hellebore,) tomorrow the symptoms may again indicate excitants, and thus the treatment must necessarily vary.

Excitants, or counter-excitants, are also, at times, needed externally; if the patient has a deep seated cough, strong liniment, composed of oil, hartshorn and turpentine, (and sometimes camphor,) must be applied. Often I annoint the parts with a thick paste, composed of mustard and vinegar. The membranes of the *fauces*—throat—are excessively sore, then the same course has to be pursued, at the same time a mucilagenous drink, composed of flaxseed, sweetened with honey, must be allowed. The nervous system must also be aroused by the application of the above liniment to the spinal column.

At another stage of the malady, *diaphoresis* must be excited by clothing the body with flannel, and drenching with a preparation known as solution of *acetate* of *ammonia*, to the amount of six or eight ounces per day, until the skin feels soft and warm.

In case *œdema*—local dropsy—of the body or extremities sets in, the patient then requires *diuretics;* one or two ounces of sweet spirits of nitre may be given in linseed tea, until the kidneys respond, and the secretion of urine becomes augmented. The bowels are sometimes inactive, the *fæces* are clothed with mucus, and have a fœtid odor. I then prescribe:—

Linseed oil..... } Equal parts.
Lime-water..... }
Dose—Eight ounces.

Occasionally the animal becomes uneasy, paws with his fore feet, the pulse is somewhat wirey, and beats at the rate of fifty, and over, per minute. I then give camphoreted tincture of opium, one ounce, and repeat the dose if necessary. This state is one of great danger because it indicates active congestion of the bowels, which may result in mortification of the same. In order to ward off the last stage, I depend chiefly on stimulants, sedatives and tonics. The best tonics are powdered *gentian, golden-seal, quill-bark;* either of which may be advantageously given, as they possess very little, if any, astringency.

Prescription for a tonic ball:—

Either of the above tonics, powdered.....3 drachms.
Ginger.....1 drachm.

Rub them together in a mortar, then add a teaspoonful of molasses, and a small piece of brown soap, and form a bolus.

Among all the cases that have come under my care and observation, I have neither found it advisable nor necessary to practice the *anti-phlogistic* treatment, in so far as it relates to bleeding and purging; and I cannot conceive a case (so depressing as influenza is known to be,) that would require any such heroic treatment; the safety of our patient depends on the judicious application of remedies such as are here named; and, therefore, I would warn the farmers against the use of *fleam* and *cathartic* in the treatment of the prevailing influenza. Yet, after all, the very best treatment may fail in restoring a patient. We require aid in the form of pure air, suitable diet and good nursing; failing in the latter important adjuncts, our treatment avails but little.

The reader will probably perceive that the above disease, like many others to which domestic animals are subject, requires professional skill, consequently the farmers should use their means and influence for the purpose of having a properly qualified veterinary surgeon in their several localities. We are now in possession of the long needed facilities for imparting a thorough course of instruction to all who knock at the door of veterinary science. We have an incorporated institution in this city, and are in possession of men and facilities to impart to the aspirant for veterinary honors, as practical an education as can be obtained elsewhere.

G. H. D.

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MILK PAINT.—A paint has been used on the continent of Europe, with success, made from milk and lime, and dries quicker than paint, and has no smell. It is thus made. Take fresh curds, and bruise the lumps on a grinding stone, or in an earthan pan or mortar, to make it just thick enough to be kneaded. Stir this mixture without adding more water, and a white colored fluid will soon be obtained, which will serve as a paint. It may be laid on with a brush with as much ease as varnish, and it dries very speedily. It must, however, be used the same day it is made, for if kept till next day it will be too thick; consequently no more must be made at one time than can be laid on in a day. Any color, red or yellow ochre, may be mixed with it in any proportion. Prussian blue is changed by the lime. Two coats of this paint is sufficient, and when dry, it may be polished with a piece of woolen cloth, or similar substance, and it will become bright as varnish. It is only for inside work; but it will last very long if varnished over with the white of an egg after it has been polished.

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## EXTRACTS AND REPLIES.

### WHOLESOME IMPRESSIONS OF RURAL LIFE.

The reader cannot fail to see, in the following, the beautiful and healthful impressions made upon the mind by an early and intimate acquaintance with rural life. They are a fountain from which gush up perpetual pleasures, as the well-spring sends up its cool, clear and sparkling water, and thus have a decided influence, little as we may think of them, upon the character and happiness of life. See how delightfully they nestle in the bosoms of men immersed in the business and cares of life:—

One of us was out, yesterday, at the old homestead, in West Brookfield, Worcester county, where our childhood was passed, and very vividly came up the recollections of the days, when we boys of ten to fourteen years, rode horse to plow, spread the swath after the mower, and

"Jocund drove the team a-field,"

and sometimes, even at an early age, our heads hardly higher than the plow-handle, yet guided that kingly instrument along its furrowed track. The Depot now stands upon the exact spot where we once raked after the cart, or at ten o'clock, under the shade of a spreading oak, partook of the luncheon of bread and cheese, with a relish of appetite never since equalled. The music of our repast was the "spink, spank, spink," of the chattering bobo-link, balancing himself upon some tall field lily, or stout stem in the meadow. It all comes back:

"Then summer heats refulgent come—
The air is filled with insect hum;
With skilful arm, but strong and lithe,
The sun-browned farmer swings his scythe;
His fervid rays old Sol down pours,
Which promise give of garnered stores,
Which shall dispel of want the fear,
When winter rules the "inverted year."

Blest be the farmer! Honored his occupation! The voice of health and rejoicing is in his habitation! Sweet are his slumbers—refreshed his awaking. He communeth with nature, and is taught from her ever-instructive volume.

"Ill fares the land to threatening ills a prey,
Where wealth accumulates, and men decay;
But a bold yeomanry, their country's pride,
When once destroyed can never be supplied."

We are a sort of amateur farmers now, finding relaxation from turbulent business cares in the cultivation of a few acres, and our hearts go out to all engaged in this honored vocation. Success to your labors to aid their toils. G. & C. MERRIAM.

*Springfield*, 1856.

### ICE HOUSES.

MR. BROWN :—I want your knowledge, or opinion in regard to an improvement I desire to make to my ice house. It is built entirely above ground, 12½ feet in the clear, and 12 feet high, with posts set in the ground, sided up with 1¼ inch prime plank, and enclosed by another house or shell, 16½ feet in the clear, same height and same material,—leaving a space 2 feet between the two,—which is filled with tan bark. The ground on which it stands is slightly elevated, and with an additional 6 inches of tan bark, then the ice (last winter 4 inches thick) is put in, a layer at a time, till the house is full.

Now what I want to know, without the expense of the experiment, is whether the ice will keep better by making the bottom like the sides and suspending the bottom with sleepers, say 6 or 8 inches above the surface of the ground?

The ice house is protected by another house 32 by 30 feet, posts 12½ feet high, planked up with 1¼ inch pine boards set on end. The spaces between the ice house and the outside protection serve as wood-house and carriage-house, so the room is all used, and the ice house thoroughly protected from the sun. The ice held out till the last of September, and we used it without stint or measure in the family, and supplied the neighborhood in sickness, and used it as a milk-room in hot weather, covering the warm milk-pans in the ice. The waste water from the ice flowed at times quite freely. Next summer I want to make it supply a milk-room before it loses its icy nature.

*Locust Lawn, New Albany, Ind.*

REMARKS.—Raise your ice-house 12 to 15 inches above the surface of the ground, and let the wind have free passage under it, not being obstructed by your outside building. The floor should be tight, though it is not absolutely necessary to have it double and lined with tan, as the cold air will contantly find its way to the bottom. The keeping of ice well depends in a great measure upon having it in large quantities and compactly stowed. We propose to give a more extended article on ice and ice-houses at a future time.

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### APPLE ORCHARDS.

MR. UNDERWOOD, of Lexington, in reply to our question, why he prefers southern slopes for apple orchards, says:—"My reasons are these: that with such a location the trees will be protected by the rising ground on the north and northeast, and from the winds and storms that prevail from that quarter. The frost will also be out of the ground earlier in the season, and of course the trees will sooner get the benefit of the opening spring." He also informs us that he has not taken the premiums for orcharding which we supposed he had.

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### APPLES FOR COWS.

MR. EDITOR :—I live in a county where in times past apples fed to cows were said to dry up their milk. I think that may have been the case when fed in large quantities. I have been feeding a cow some four or five quarts a day, regularly, and never had one give so much or so rich milk before. As apples will not generally keep through the winter in cellars, they may be spread on the barn floor and frozen, then piled up and covered with hay or straw, where they will keep, and may be used as wanted by pouring water upon them.

*West Windsor, Vt.*, 1855. A SUBSCRIBER.

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### CLAY WATER—COAL ASHES.

MR. EDITOR :—What will settle a newly dug well, where the bottom of the well is of a clayey nature? I have dug one this fall—the water is beautiful to the taste, but will not settle and appear clear.

Will you inform me whether coal ashes are good for anything as a manure? By answering the above, you will confer a great favor on a constant reader of your valuable paper. J. F. R.

*Hopkinton, Dec.* 7, 1855.

REMARKS.—There are no means in our knowledge, whereby to "settle," or make clear, the water in your well, that is, while it is there. Nor do we believe that it contains any substance injurious to health. If you prefer to have it appear perfectly clear, place in a keg or cask of any kind whatever, a layer of pebbles, then sand, then fine charcoal, then sand, again, each layer beingthree inches in depth, upon this and turn the water and letit pass through and draw it off at the bottom. The water in your well will, probably, always, retain its present appearance; that is, if it has merely a whitish appearance and no sediment is visible to the naked eye. But if particles are visible, then by-and-bye, they will probably subside and the water become much clearer.

Coal ashes are good manure, and ought to be preserved.

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### HOW TO USE LIQUID MANURE.

GENTLEMEN :—In all works on Agriculture, liquid manure is strongly recommended, but in no one do I find directions for its use which are satisfactory. Can you inform me through your valuable paper, the necessary strength of the liquid? What proportions of either of the following articles are to be used in 100 gallons of water, and the times of its application to grass lands?—either guano, superphosphate of lime, soot, night-soil, urine, or liquid from manure heaps. (*a.*)

If used of too great strength, it would only burn up the grass, and if too weak, would be of little advantage. (*b.*)

I have engaged about 200 bushels of soot, from a person who has cleaned chimneys where wood is burnt, and also 200 bushels of soot, taken from the flues of boilers where anthracite coal is used. To what crops would they be of the greatest benefit, and what is the mode of applying it.

*Salem*, 1855. A SUBSCRIBER.

REMARKS.—(*a.*) It should not be used strong, for more reasons than the above named.

(*b.*) There is no danger of diluting it too much, provided the ground be thorough-drained, or have naturally a subsoil sufficiently porous to allow the water to pass off freely. In this case, (and liquid

manure should be used in no other,) there is no limit to the amount of water in which manures may be dissolved, except that of economy. Use therefore as much water as you can afford to carry into the field. More on this subject in our next; something also, on the subject of irrigation, which is closely connected with it—almost the same thing; and on the composition and uses of soot.

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RAISING WHEAT.

FRIEND BROWN:—"Some things can be done as well as others," were the words of Sam Patch as he leaped the falls for the last time. That wheat can be raised in New England is an incontrovertible fact. The high prices of flour the past season, induced many farmers that never sowed wheat before, to try it last spring, and the result in this vicinity, or as far as my observation extends, is that it is the most profitable crop raised.

Last spring I obtained 1½ bushels of coffee or Java wheat, (which bears its name from the seed being taken out of some Java coffee,) which I sowed on one acre of ground, and harvested from it 29 bushels, which weighed 61 lbs. to the bushel. This wheat is bearded and covered with white husks, which drop off very easy and the grain shells out easy. The flour from it is large in quantity, it being thin-skined wheat, and not only equal, but better than the best Genesee flour. J. D. WARD.

*North Ashburnham, Dec.* 17, 1855.

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PLANS FOR BARNS.

MR. EDITOR:—Presuming you would be willing to enlighten a subscriber on any subject connected with agriculture, I take the liberty of asking you to send me, or publish, the best ground plot for a barn about forty-five by fifty feet; the best mode of weather-boarding, &c. R. HAINES PASSMORE.

*West Chester, Pa.*, 1855.

REMARKS.—We contemplate presenting some outlines of barns by-and-by. In the mean time perhaps some of our correspondents may suggest some plan that will be favorably received.

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GRAPE SEEDS.

MR. EDITOR:—Please inform me through your paper what is the best time to plant grape seed?

*Yankee Settlement, Iowa.* L. H.

REMARKS.—Grape seeds may be sown either in the fall or the spring, but as in keeping them through the winter they may become too damp or too dry, as the place may be where they are kept, perhaps it is better to sow them in the autumn, and in such a manner as to resemble the condition they would be in if falling from a spur in a vineyard; that is, among decaying leaves and twigs, and in a light, rich mould. Small seeds are apt to be covered too deeply. So deep as to be in a suitable condition to keep for ages, or too deep to germinate, and not deep enough to preserve them, and thus they become moist, are slightly quickened by the solar rays, but cannot push out a germ sufficiently vigorous to reach the surface, and consequently perish.

SPROUTED WHEAT.

I wish you, or some of your correspondents acquainted with experimental or practical farming, would inform me through the *N. E. Farmer*, whether it would be safe to depend upon grown wheat for seed, as I am calculating to sow some next spring, and have a few bushels not quite as good for bread as that not grown. An answer to the above, from a source to be depended on, would be gladly received by me, and perhaps be a benefit to others. W. BUGBEE.

*Orfordville, N. H.*, 1855.

REMARKS.—If we had a field to sow, we would not run the risk of sowing seed that had sprouted, or "grown," as it is called. A gentleman at our elbow says he has tried it, but that it has always failed to grow. Our correspondent will accept thanks for his hearty words of commendation of the *Farmer*.

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AN APPLE TREE.

I have an apple tree that was nine years old last spring, that has borne for five years. On the 8th day of Oct. I gathered three bushels of apples from the same tree, and since have measured it; the height is nineteen feet and eight inches; four inches above the ground, it is two feet in circumference, and five feet from the ground it is one foot and five inches. It is natural fruit, and similar to the Baldwin apple. It has grown without any extra care or trouble. SAMUEL W. BLODGETT.

*Acworth, N. H.*, 1855.

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POWDER MILL WASTE.

MR. EDITOR:—We have a powder-mill in our place, where a number of barrels of stuff from the saltpetre refinery is taken off. What I wish to know is, what it is worth, if anything, for manure, and how applied? If you, or some of your correspondents, will inform me through your valuable paper, you will oblige a subscriber. J. H. A.

*Fair Haven*, 1855.

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*For the New England Farmer.*

## DO POTATOES MIX?

MR. EDITOR:—As much has been said in your interesting and very valuable paper, during the last few months, about potatoes—concerning the relative value of large potatoes, small potatoes and cut potatoes for seed, &c.,—I feel a desire to extend the potato inquiry a little further. I find the opinion quite prevalent among farmers—or at least among men laboring on farms—that different kinds of potatoes planted together will intermix; one kind become changed, or at least, partially changed to another. I have ever supposed the opinion was erroneous, and if I am in mistake, I wish to be corrected. If such a thing takes place, how is it effected? Is it done by seeding, that is, growing balls, or by some other way? In this region, we have but few varieties of potatoes that ever produce balls.

*Enosburg Falls, Vt.*, 1855. A PIXLEY.

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THE CAROLINA CULTIVATOR.—The services of Prof. B. S. HEDRICK Professor of Agricultural Chemistry in the University of North Carolina, have been secured as Editor of this paper.

*For the New England Farmer.*

PORTRAITS

## FROM THE FIELD AND FARM YARD.

BY WILSON FLAGG.

### THE CROW.

The crow is one of the most remarkable and well known of all our winter birds. Every one is familiar with his black plumage, his peculiar manners and his croaking voice. Unfortunately, he is regarded with an evil eye, and there is no other bird that suffers such general persecution. In no kingdom or province is he protected either by custom or superstition, and there is no peace for him in any part of the earth where man resides. Remembering the mischief he does by plundering a few grains of corn in the sowing season, and forgetting the benefits he confers by the destruction of myriads of noxious insects, the farmer looks upon him as the enemy of his crops, and destroys his species by every means which he can invent; as an excuse for this atrocity he is accused of all sorts of unamiable and wicked propensities. He is abused for his cunning, his stealth, his mischievousness and his habits of thieving. But his stealings might justly be regarded as the perquisites attached to his office as scavenger and destroyer of vermin. His cunning is the natural result of the machinations made against him on all sides, and the traps that are constantly set for his destruction.

His wariness is really a virtue; because under the circumstances in which he is placed, it is one of his principal means of self-preservation; and I am persuaded that the persecutions to which he has always been subjected have caused the development of an amount of intelligence that elevates him many degrees above the majority of the feathered race. Let one be born with no more sagacity than a common hen or turkey, and he would not escape the snares of his enemies a week after he had left the maternal nest. There are few birds more interesting from their manifestations of intelligence. He observes many things that seem to require reason in the observer. He knows at once from the deportment of the person whom he sees, whether he is prepared to do him an injury, and takes but little notice of one who is strolling the fields in search of flowers, or for recreation. Such a person may approach so near him as to observe his manners, and even to note the varying shades of his plumage. Neither does he seem to regard the presence of a party in a chaise or on horseback; but if you have a gun in your hand, you can hardly get sight of one for the whole day.

The crow is by no means destitute of beauty. His coat of glossy black, with violet reflections; his hazel eyes and intelligent look; his stately and graceful gait, and his steady and equable flight, notwithstanding his want of brilliant colors, combine to yield him a handsome and dignified appearance. The crow, and his congener, the raven, have always been celebrated for their gravity—an appearance which seems to be the result of his black sacerdotal dress and certain exhibitions of intelligence in his ways and general demeanor. Any one who should watch his motions for the space of five minutes, either when he is stalking alone in the field, or when he is careering with his fellows around some tall tree in the forest, must be satisfied that he deserves to be called a grave bird. His voice has nothing to recommend it; it is harsh and unmelodious. But Æsop mistook the character of the crow when he represented him as the dupe of the fox, who gained the bit of cheese he carried in his mouth, by inducing him to sing and exhibit his musical powers. Vanity is evidently no part of his character.

The expedients used for the destruction of the crow in all parts of the world are cruel and shameful. The laws of every nation have set a price upon his head. He is hunted with the gun; he is caught in crow-nets; he is hoodwinked with bits of paper smeared with birdlime, in which he is caught by means of a bait; he is poisoned with grain steeped in hellebore and strychnine; the reeds in which he roosts are treacherously set on fire; he is pinioned by his wings on his back, and made to grapple his sympathizing companions who come to his rescue; and children after receiving lessons of humanity, are taught to regard the crow as an unworthy subject, when carrying those precepts into pactice. Under every government he is made an outlaw by legislation, and is everywhere held up for public execration.

As an apology for all this inhumanity, are enumerated a variety of misdemeanors of which he is guilty. He pillages the cornfield both in the spring when it is planted, and in the autumn when it is gathered; he destroys the eggs of innocent birds whom we would like to preserve; he purloins fruit from the garden, and carries off young ducks and chickens from the farm-yard. But to make amends for these overt acts, he confers upon man some special benefits. Omnivorous in his habits, he destroys in the course of the year, vast myriads of grubs, worms and noxious vermin; he clears the land of offensive masses of decaying fish and flesh; he hunts the grassfields and pulls out and devours the cutworms wherever he perceives the evidence of their operations; he destroys mice, lizards, young rats, and the smaller serpents; lastly, he is a kind of sentinel about the farm, and drives the hawk from its enclosures.

After weighing the services he performs for man against the mischief he occasions, I cannot think he deserves death. It is during seed-time and harvest that his depredations are chiefly committed; and so highly are his services appreciated by those who have written of birds, that there is hardly an ornithologist who does not plead in his behalf. Audubon remarks, "I can well assure the farmer that were it not for his race, thousands of cornstalks would every year fall prostrate, in consequence of being cut down close to the ground by the destructive grubs which are called *cutworms*." Waterton says, "he does but very little injury to man during nine or ten months of the year,"—"and for my own part, I should lament his final absence from our meadows and our woods." Wilson, and many others, also plead for him, and would save his species from extermination.

But the crow, independently of the services rendered by him as a scavenger and a destroyer of vermin, may be esteemed for certain qualities which are agreeably associated with the charms of nature. It is not the singing birds alone that contribute by their voices to gladden the husbandman and cheer the solitary traveller. The crowing of the cock at break of day, is as joyful a sound, though not so musical, as the voice of the robin, who, in his season, chants his lays at the same early hour. The cawing of the crow is to me one of the most cheerful

of sounds, and is heard long before the majority of birds have left their perch. If not one of the melodies of morn, it is one of the most notable sounds that herald its approach. And how intimately is the voice of this bird associated with the sunshine of pleasant winter days; with our woodland excursions during this inclement season; with the stroke of the woodman's axe; with open doors during warm winter days, when the eaves are dripping with the melting snow, and with all those cheerful voices that enliven the groves during the period when every object is valuable that relieves the silence or softens the dreary aspect of nature.

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*For the New England Farmer.*

## HOW TO RAISE COLTS.

DEAR SIR:—I am often asked the best mode of feeding colts the first and second winter after taking them from the mare, and not having had much experience in the raising of colts, could not give the necessary information.

I would therefore like, through the columns of the *Farmer*, to receive the answers to the following questions, for my satisfaction, and for the information of others.

Is it well to give colts oats, or any other provender, the first or second winter after taking them from the mare?—or are they better to be kept upon carrots and other roots?

Is it best to take them from the mare before they are brought to the barn for winter, or to wean them on hay?

How long should a colt remain with the mare before it is weaned?—or in other words,—how old should it be?

Would it be of service to the colt to remain with the mare all winter, if it could be done conveniently?

Would it injure the mare if she could be kept in good flesh and spirits?

Answers to the above, as soon as possible, would be desirable. A SUBSCRIBER.

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REMARKS.—There are five hundred persons among our readers abundantly qualified to answer the queries propounded above. Will some one do so?

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*For the New England Farmer.*

## GREAT YIELD OF POTATOES.

MR. EDITOR:—A few days since I noticed an article copied from a Providence paper, "that a lot of 50 potatoes, raised thereabouts, weighed 50½ lbs." this does not seem "hard to beat," and would rather place that fifty among my small ones.

I have raised this season, and since seeing the above article have weighed, 25 potatoes which weigh 56¼ lbs. If any one can beat this, I will try again. Perhaps at a future day I will give you my method of culture, which has produced as many and as fine potatoes as ever were grown; a field of 3½ acres producing at an average of less than 12 hills to the bushel. O. S. SANFORD.

*Cordaville, Oct.*, 1855.

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REMARKS.—We shall be glad to publish your account when furnished.

# LADIES' DEPARTMENT.

## DOMESTIC HINTS.

BIRD'S-NEST PIE.—Take a deep baking tin, and set as many apples in it as will cover the bottom. Pare them and remove the core from one end; make a custard and fill each apple, as it is placed in the dish. Then make a thick flour batter, pour over the whole, and bake one hour. Serve with sour sauce.—*Ohio Farmer.*

BOILED POT-PIE.—Take two quarts of apples, pare, core and quarter, then put them into a pot or kettle, and sprinkle on a little sugar, grated nutmeg, and pour in water enough to boil them. Then make a light saleratus crust, and roll one inch thick, of the size of the kettle, and lay it on the apple; boil three-fourths of an hour without cessation. Prepare the sauce in the same way as the bird's-nest pie.—*Ohio Farmer.*

HOW TO BURN COAL.—The great mistake of all is to put on too much coal, as if it were wood—the greater the heat. If too much coal is applied, the combustion is necessarily "choked up," the draught destroyed, and the elements of the coal slowly escaping from it to pass off to the chimney unconsumed, or are disseminated in gases through the room. Whereas, if the strata of coal be but moderate, a red flame will play around the interior of the stove, by which entire combustion and a healthy heat are secured. One ton of coal, therefore, by thorough combustion, will often secure more heat and a healthier atmosphere, than two tons secured in the ordinary way; and this is a fact which can easily be demonstrated. It will be very important, this winter especially, to have attention paid to this rule.—*Graham's Magazine.*

VEGETABLE SEASONERS.—Parsley, celery, thyme, sage, onions, garlic, and other seasoners, should not be put into soups or stews until the soup is nearly done; chop fine, and put in five minutes before the soup is taken from the fire.

COOKIES.—One tea-cup of butter, two of sugar, two eggs, four table-spoonsful of sour milk, one teaspoonful of pearlash put into the milk with spices. *Ohio Farmer.*

STEWED CELERY.—The *Horticulturist* recommends highly stewed celery. Cut the blanched or white portion of the celery stalks in pieces about an inch in length, and put them in a sauce-pan over the fire, with milk and water, in equal proportions, barely sufficient to cover them; add a little salt and let them stew gently, until perfectly tender. Then take out the celery, add a piece of butter to the liquor it was boiled in, thicken it slightly with flour, pour it over the celery, and serve it up.

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A SOURCE OF SMILES.—Dr. Franklin having noticed that a certain mechanic, who worked near his office, was always happy and smiling, ventured to ask him for the secret of his constant cheerfulness.

"No secret, Doctor," he replied, "I have got one of the best wives, and when I go to work, she always has a kind work of encouragement for me; and when I go home she meets me with a smile and a kiss, and the tea is sure to be ready; and she has done so many little things through the day to please me, that I cannot find it in my heart to speak an unkind word to anybody."